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- Shikshanmaharshi Dr. Bapuji Salunkhe

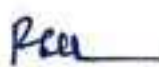
**Shri Swami Vivekanand Shikshan Sanstha's**  
**Vivekanand College, Kolhapur**  
**(Autonomous)**



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 Dr. R. R. Kumbhar  
**PRINCIPAL**  
 Vivekanand College  
 Kolhapur

**VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)**  
**DEPARTMENT OF CHEMISTRY**  
**Project Report YEAR 2021-22**

Sr.No.	Name of the Guide	Title Name	Name of the Student
1	Dr.Mrs. S. O. Shirke	"Green synthesis of silver nanoparticles and their applications in chemical synthesis"	1. Mr. Krishnath Baliram Gaikwad 2. Mr. Pravin Prakash Patil 3. Miss. Aishwarya Vinayak Rangnekar 4. Miss. Shrutika Vishnu Khachnale 5. Miss. Prajkata Malhari
2	Dr. A.A. Patravale	"Synthesis and characterization of bis(indolyl) alkane"	1. Miss. Savita Ravasaheb Vitthanna 2. Miss. Bhakti Bhimrao Desai 3. Miss. Pradnya Prakash Kamble 4. Miss. Namrata Yashwant Patil 5. Miss. Varsha Suryakant Potdar
3	Dr. Dipak S. Gaikwad	"Synthesis of 2-Pyridone by using basic ionic liquid as a catalyst"	1. Mr. Madhukar Ananda Phadake 2. Mr. Prathamesh Pandurang Daware
4	Dr. Sanjay S. Ankushrao	"Synthesis, characterization and properties of processable polyzomethine for high temperature applications"	1. Mr. Avadhut K. Belanekar 2. Mr. Pranav M. Ghatage 3. Miss. Tanavi K. Kadam 4. Mr. Abhjit V. More 5. Miss. Rutuja A. Patil 6. Miss. Mrunali P. Salunkhe
5	Dr. Dipak S. Gaikwad	"Synthesis of 2,3-Dihydroquinazolin-4(1H)-one by using acidic ionic liquid as catalyst"	1. Miss. Gayatri Vikas Kamatkar 2. Miss. Aishwarya Anil Patil 3. Miss. Sadhana Namdev Vadar
6	Dr. Mrs. S.D. Shinde	"A Plant Mediated Synthesis of NiO nanoparticles and its application"	1. Miss. Yogini Ganpati Chougule 2. Miss. Aishwarya Ramchandra Kadam 3. Miss. Shivani Dhananjay Pachwadkar 4. Mr. Suraj Arjun Pernole 5. Miss. Pratiksha Shivanand Telsang
7	Dr. Miss. S. S. Bandagar	"Ayurveda a distinctive approach to health and disease"	1. Miss. Roshani Rajaram Dhere 2. Miss. Rutuja Sudhakar Karade 3. Miss. Sharvari Sanjay Patil 4. Mr. Nilesh Anil Patil 5. Mr. Pratik Jaysing Nayakawadi 6. Mr. Rushikesh Anil Ranavare
8	Dr. Satish S. Kadam	"Synthesis of benzylbaiturocoumarin derivatives by using ionic liquid"	1. Miss. Simran Babu Sequeria 2. Miss. Sayali Shahaji Patil 3. Mr. Prasann Sunil Shinde 4. Mr. Akshay Shamrao Mote 5. Mr. Vaibhav Shripal Bhagwat
9	Dr. K. A. Undale	"Multi-Component Synthesis of Benzo[B]Pyrans"	1. Mr. Sandesh R. Mane 2. Ms. Shivani A. Gaikwad 3. Ms. Nikita K. Salokhe

*S. D. Shinde*  
head

**Dept. of Chemistry**  
**Vivekanand College Kolhapur**





**KOLHAPUR**

NAAC - Re Accredited "A"  
CGPA = 3.52

**A**

**Project Report**

**Entitled**

**"Multi-Component Synthesis of Benzo[b]pyrans"**

Submitted to,

**PG Department of**

**Vivekanand College, Kolhapur**

For the partial fulfilment of practical course for  
the award of M.Sc. degree in Organic Chemistry

By

<b>Mr. Sandesh R. Mane</b>	<b>1021</b>	<b>Mr. Sourabh A. Bhaskar</b>	<b>1005</b>
<b>Ms. Shivani A. Gaikwad</b>	<b>1011</b>	<b>Ms. Sonali S. Babar</b>	<b>1002</b>
<b>Ms. Nikita K. Salokhe</b>	<b>1040</b>	<b>Mr. Rahul B. Patil</b>	<b>1031</b>

**Project Guide**

**Dr. K. A. Undale**

Department of Chemistry  
Vivekanand College, Kolhapur

**2021 - 2022**



# CERTIFICATE

This is to certify that Mr. Sandesh R. Mane , Mr. Sourabh A. Bhaskar, Ms. Shivani A. Gaikwad, Ms. Sonali S. Babar, Ms. Nikita K. Salokhe, Mr. Rahul B. Patil of the Class M. Sc. II has satisfactorily completed the project work on the title "**Multi-Component Synthesis of Benzo[b]pyrans**" as a partial fulfilment of the practical course for the award of the M. Sc. Degree in Organic Chemistry by Shivaji University, Kolhapur.

Place: Kolhapur

Date:

Dr. K. A. Undale

Co-ordinator,

M. Sc. Organic Chemistry,  
Vivekanand College, Kolhapur

Dr. Mrs. S. D. Shirke

Head

Dept. of Chemistry  
Vivekanand College Kolhapur

Examiners

## ACKNOWLEDGEMENT

*We wish to express our deep sense of gratitude towards Dr. K. A. Undale, Assistant Professor, Department Of Chemistry, Vivekanand College, Kolhapur for his valuable guidance to complete this project within time.*

*It is our proud privilege to express the sense of gratitude and sincere thanks to Principal Dr..R .R. Kumbhar & Dr. Mrs. S. D. Shirke, Head, Department of Chemistry, Vivekanand College, Kolhapur for providing all the available facilities of the college for completion of this project.*

*Our sincere thanks to all those who have directly or indirectly involved in this project work.*

*Mr. Sandesh R. Mane*

*Ms. Shivani A. Gaikwad*

*Ms. Nikita K. Salokhe*

*Mr. Sourabh A. Bhaskar*

*Ms. Sonali S. Babar*

*Mr. Rahul B. Patil*

## DECLARATION

It is hereby declared that the work reported in the project entitled "**Multi-Component Synthesis of Benzo[*b*]pyrans**" is completed and written by us and has not been copied from anywhere.

Place: Kolhapur

Date: / / 2022

Mr. Sandesh R. Mane	1021	Mr. Sourabh A. Bhaskar	1005
Ms. Shivani A. Gaikwad	1011	Ms. Sonali S. Babar	1002
Ms. Nikita K. Salokhe	1040	Mr. Rahul B. Patil	1031



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## ➤ Introduction

Green chemistry emphasizes the development of environmentally benign chemical processes and technologies<sup>1</sup>. The use of water as a solvent for organic transformations offers several "green chemistry" benefits<sup>2</sup>. In many reactions, such as the Diels-Alder cycloaddition<sup>3</sup>, significant rate enhancements are observed in water compared to organic solvents. This acceleration has been attributed to many factors, including the hydrophobic effect<sup>4</sup>, enhanced hydrogen bonding in the transition state<sup>5</sup> and the high cohesive energy density of water (550.2 cal.mL<sup>-1</sup> at 25 °C)<sup>6</sup>. The Diels-Alder reaction is also known for its negative activation volume, owing to a transition state that is more compact than reactants. Reactions with negative activation volumes are accelerated at high pressure and with nonpolar reactants, in water<sup>7</sup>.

Chemistry of heterocycles has been of importance in understanding the formation of bioactive molecules as well as having industrial applications especially in pharmaceuticals. The majority of pharmaceuticals and biologically active agrochemicals contain heterocyclic moieties with addition of countless additives and modifiers. The applications ranging from cosmetics, reprography, information storage and plastics heavily depend upon the heterocyclic residues. One of the striking structural features inherent to heterocycles, which is continued to be exploited to a great advantage by the drug industry, lies in their ability to manifest substituent around a core scaffold in well defined three-dimensional representations. Based upon these

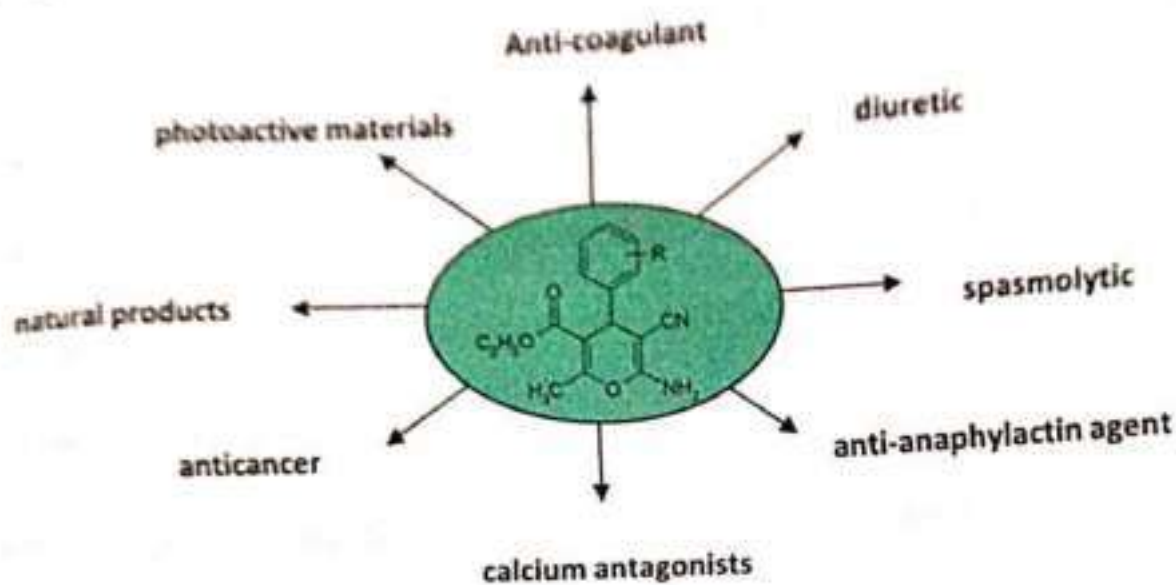


considerations in recent years, a family of new heterocyclic scaffolds has come into existence having wide range of applications such as switching on / off devices, photo catalysis, etc. 4H-pyrans [Fig. 1], synthesized in this work are fused six membered heterocyclic compounds which have attracted the attention of both synthetic chemists as well as pharmacists due to plethora of applications possible for their derivatives.

The multicomponent reactions important in combinatorial chemistry<sup>8</sup> are predicted to exhibit negative activation volumes owing to the condensation of several molecules into a single reactive intermediate and product<sup>9</sup>. Thus, not only does the use of water as solvent permit multicomponent reactions to be conducted rapidly, the products are often insoluble, facilitating their ready isolation. This method permits rapid syntheses of compound libraries. 4H-Pyrans and their derivatives are an important class of bioactive molecules in the field of drug and pharmaceuticals<sup>10</sup>. These compounds are used as anti-coagulants, anticancer agents, spasmolytics, anti-anaphylactics<sup>11,12</sup>. 2-amino-4H-pyran derivatives often used in cosmetic and pigments and utilized as potentially biodegradable agrochemicals<sup>13-15</sup>. Moreover, these compounds can be used in various applications as cognitive enhancer for the treatment of neuro degenerative diseases, including Alzheimer's disease, as well as for the treatment of schizophrenia and myoclonus<sup>16,17</sup>. 4H-Pyran derivatives are also



potential calcium channel antagonists<sup>18</sup> which are structurally similar to biologically active 1,4-dihydropyridines (1,4-DHPs).



### ➤ Methods of synthesis of pyrans

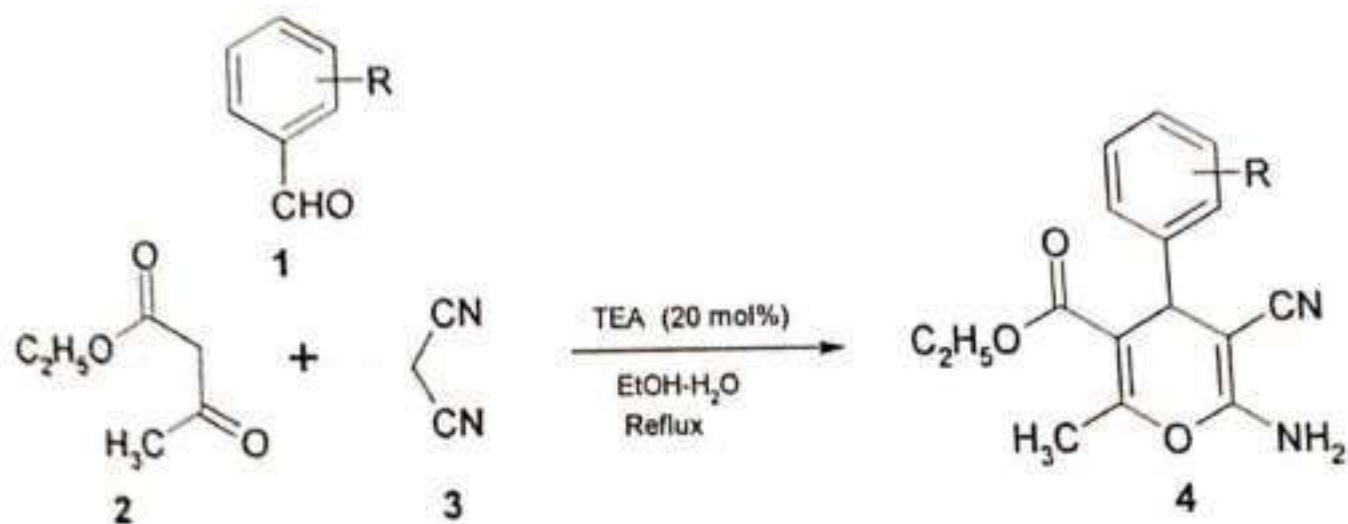
Generally, 2-amino-4-aryl-3-cyano-4*H*-pyrans were synthesized by the cyclization of arylidenemalononitriles and active methylene compounds in the presence of organic bases such as piperidine<sup>19</sup>, pyridine<sup>20</sup>, triethylamine<sup>21,22</sup>. Most of these methods involve use of volatile solvents and require longer reaction time (~ 12 h) and difficult to recover catalyst. Moreover, the cyclization of arylidenemalononitriles and ethyl acetoacetate in the presence of triethylbenzylammonium chloride, as phase-transfer catalysts, in an aqueous medium has been reported<sup>23</sup>. Recently, one-pot synthesis of these compounds

has been reported using Mg/La mixed oxide<sup>24</sup>, MgO<sup>25,26</sup> and tetramethylguanidine<sup>27</sup> as basic catalyst.

Although these methods are quite satisfactory, many of them employ considerable amounts of hazardous organic solvents, which are not environmentally friendly, for carrying out the reactions and/or for extraction and purification (column chromatography). Furthermore, these methods are not suitable in terms of the recent trends in process chemistry, because of the use of metallic catalysts. Therefore, a method using a nonmetallic catalyst is desirable. Organo-catalysts have gained interesting attraction in recent years due to economic and environmental considerations. These catalysts are generally inexpensive and easily available. They can conveniently be handled and removed from the reaction mixture, thus making the experimental procedure simple and eco-friendly. The leading contenders for environmentally acceptable processes are supported reagents.

## ➤ Present work

In continuation with our earlier experience with use of base catalyst in Michael addition, we envisaged that tri-ethylamine could be a suitable catalyst for the present transformation, it will form a strong co-ordinate bond with 'O' of 1,3-diketone to form its enolate ion and also it is sufficiently basic for the formation of cyanoolefin. Further subsequent Michael addition of enolate of 1,3-diketone on cyanoolefin, followed by cyclocondensation to form corresponding 2-amino-4*H*-pyran. Herein, we report three-component reaction of aromatic aldehydes, ethyl acetoacetate, and malononitrile in the presence of triethyl amine for a combinatorial synthesis of 2-amino-4*H*-pyran frame-works in aqueous-ethanol medium.

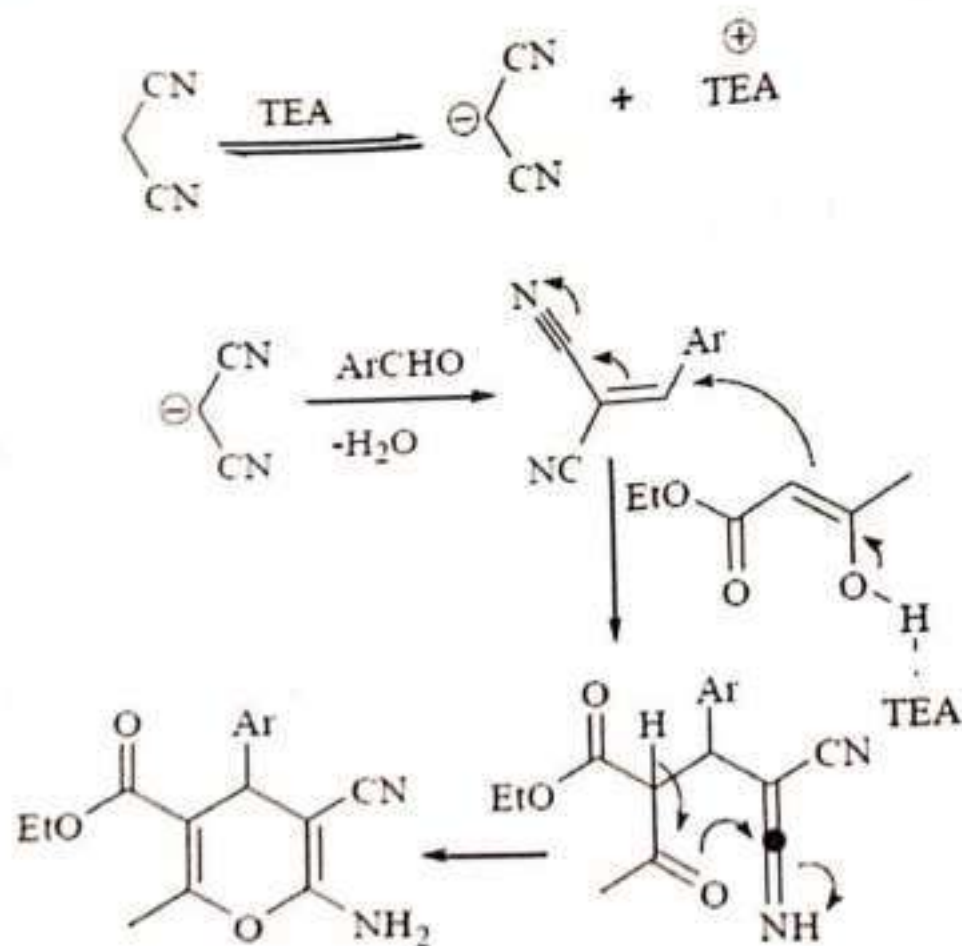


### tri-ethyl amine catalyzed multi-component synthesis of 2-amino-4*H*-pyrans

We also proposed plausible mechanism for the above synthesis, initially condensation of aromatic aldehyde with malononitrile in the presence of TEA leads to the formation of arylidenemalononitrile with the loss of a water



molecule. The nucleophilic addition of the enolizable ethylacetoacetate to arylidene malononitrile followed by intramolecular cyclization of the resulting species produce the 2-amino-4*H*-pyrans. The synthesized products are confirmed on the basis of mp, and spectral data such as NMR and IR.



### Plausible Mechanism for TEA catalyzed multicomponent synthesis of 2-amino-4*H*-pyrans

#### Results and Discussion

In order to achieve optimum conditions, we initially investigated the three-component reaction of benzaldehyde **1a** (1 mmol), malononitrile (1 mmol), and ethyl acetoacetate (1 mmol) in the presence of triethyl amine (20 mol %) in different conditions as shown in Table 1. The reaction did not proceed to

completion when water was employed as solvent. The reaction was found to proceed sluggishly both at ambient temperature and at reflux conditions and the desired product was obtained in only 45% yield after 2.5 h under reflux conditions (Table 1, entry 2). When using ethanol as solvent, the corresponding product was also obtained in low yields (Table 1, entries 3-4). Therefore, mixtures of water-ethanol were examined (Table 1, entries 5-6). Acceleration in reaction rate was observed. The best result was obtained when the reaction was carried out in water-ethanol (1:1 v/v) at reflux conditions. (Table 1, entry 6).

**Table 1: Optimization Studies: Effect of Temperature and Solvent on the Reaction**

Entry	Solvent	Temp	Time (hrs)	Yield %
1	H <sub>2</sub> O	Rt	2	20
2	H <sub>2</sub> O	Reflux	2.5	45
3	EtOH	Rt	2	53
4	EtOH	Reflux	2.5	60
5	EtOH/H <sub>2</sub> O(1:1)	Rt	2	58
6	EtOH/H <sub>2</sub> O(1:1)	Reflux	2	88

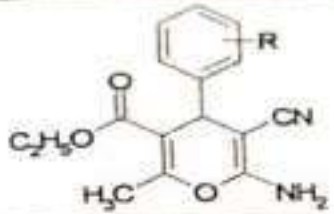
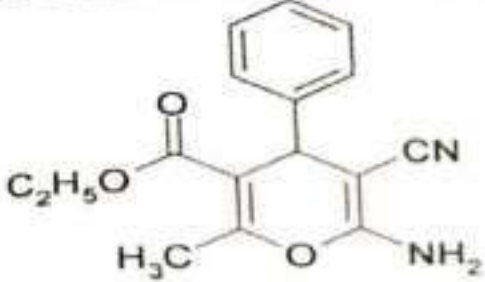
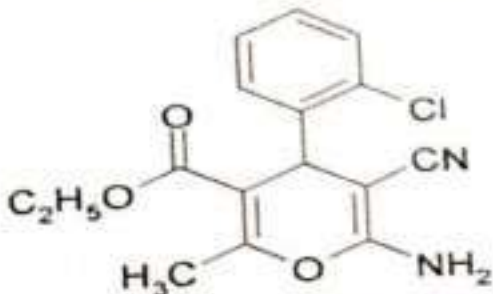
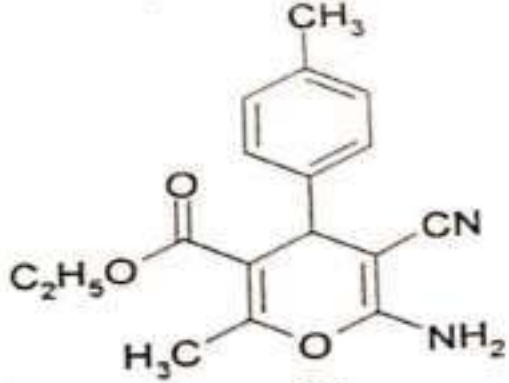
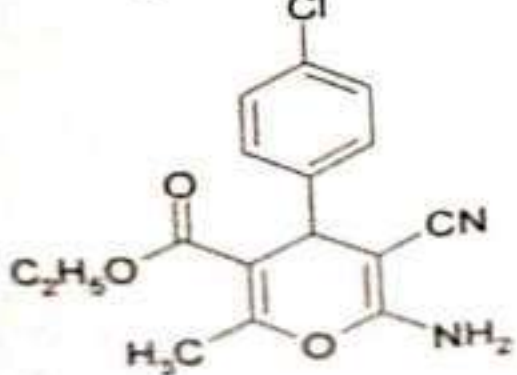
<sup>a</sup>All reactions performed with benzaldehyde (1 mmol), malononitrile (1 mmol), ethyl acetoacetate (1 mmol), and triethyl amine (20 mol %) at reflux condition. <sup>b</sup>Isolated yields after recrystallization. <sup>c</sup>The amount of solvent must be twice that of used for entry.

Along with solvent and temperature study catalyst amount is also optimized, and it was found that 20 mol % is the suitable and sufficient amount for current transformation.

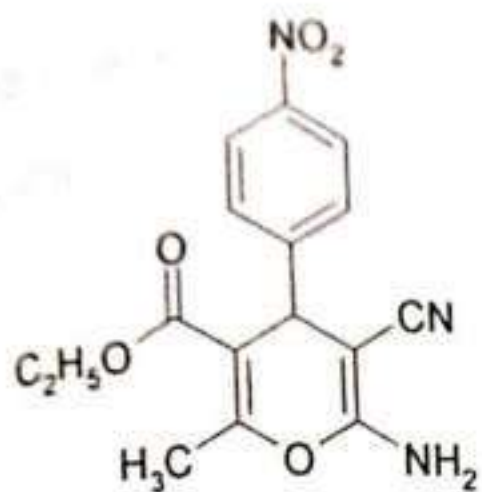
The optimized reaction conditions were then applied to a range of aldehyde substrates. Both electron-poor and electron-rich aldehydes were well tolerated. Some of the representative examples are reported in Table. 2.



Table:2 – Synthesis of 2-amino-4H-pyrans

Entry		MP (°C)	Yield(%)	Time(hrs)
4a		182	88	2.0
4b		188	85	2.15
4c		165	92	2.0
4d		140	94	2.30

4c

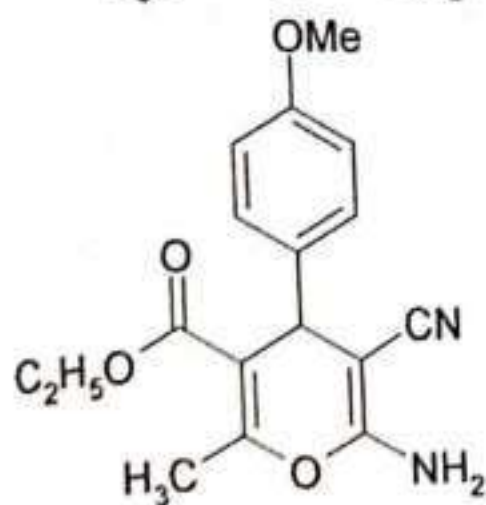


210

92

2.45

4f

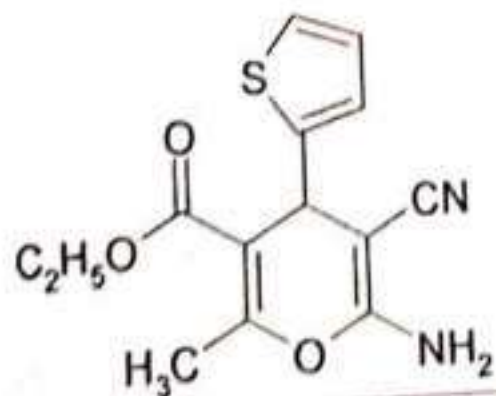


110

90

2.0

4g



235

89

2.10

### ➤ General Procedure

To a stirred mixture of aldehyde (1 mmol), malononitrile (1 mmol), methyl amine (1.3 mmol) in water-ethanol (1:1, 5 ml.) was added ethyl acetate (1 mmol) or acetylacetone. The mixture was heated at reflux temperature till the completion of reaction as indicated by TLC, after which it was cooled and the precipitated solid was filtered, washed with water and recrystallized from ethanol.

### Conclusion

We are successful in developing efficient method for multi-component synthesis of 2-amino-4//pyran at reflux temperature using tri-ethyl amine as an inexpensive catalyst. This procedure offers several advantages including mild condition, high yields, inexpensive catalyst, wide scope of substrates and operational simplicity, simple work-up, and purification of products by non-chromatographic methods, i.e. by simple recrystallization from ethanol.

### ➤ Experimental

Various aldehydes (Lancaster and Alfa-Aesar), ethyl acetate (Thomas Baker) were used as received. IR spectra were recorded on Perkin-Elmer [FT-IR-783] spectrophotometer. NMR spectra were recorded on Bruker AC (300 MHz for  $^1\text{H}$  NMR) spectrometer in  $\text{CDCl}_3$  using TMS as an internal standard and  $\delta$  values are expressed in ppm. Melting points recorded are uncorrected.



# SPECTRA



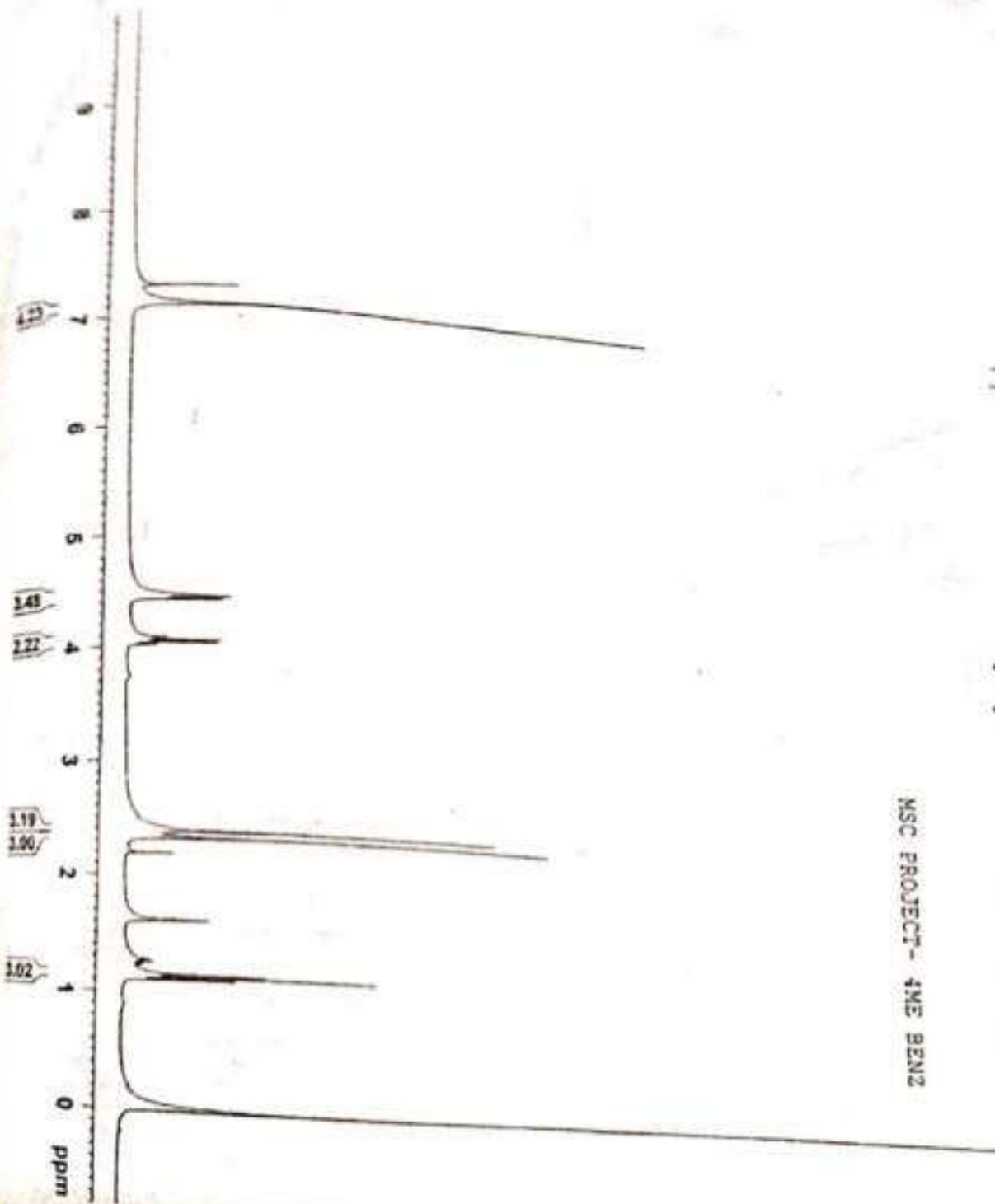
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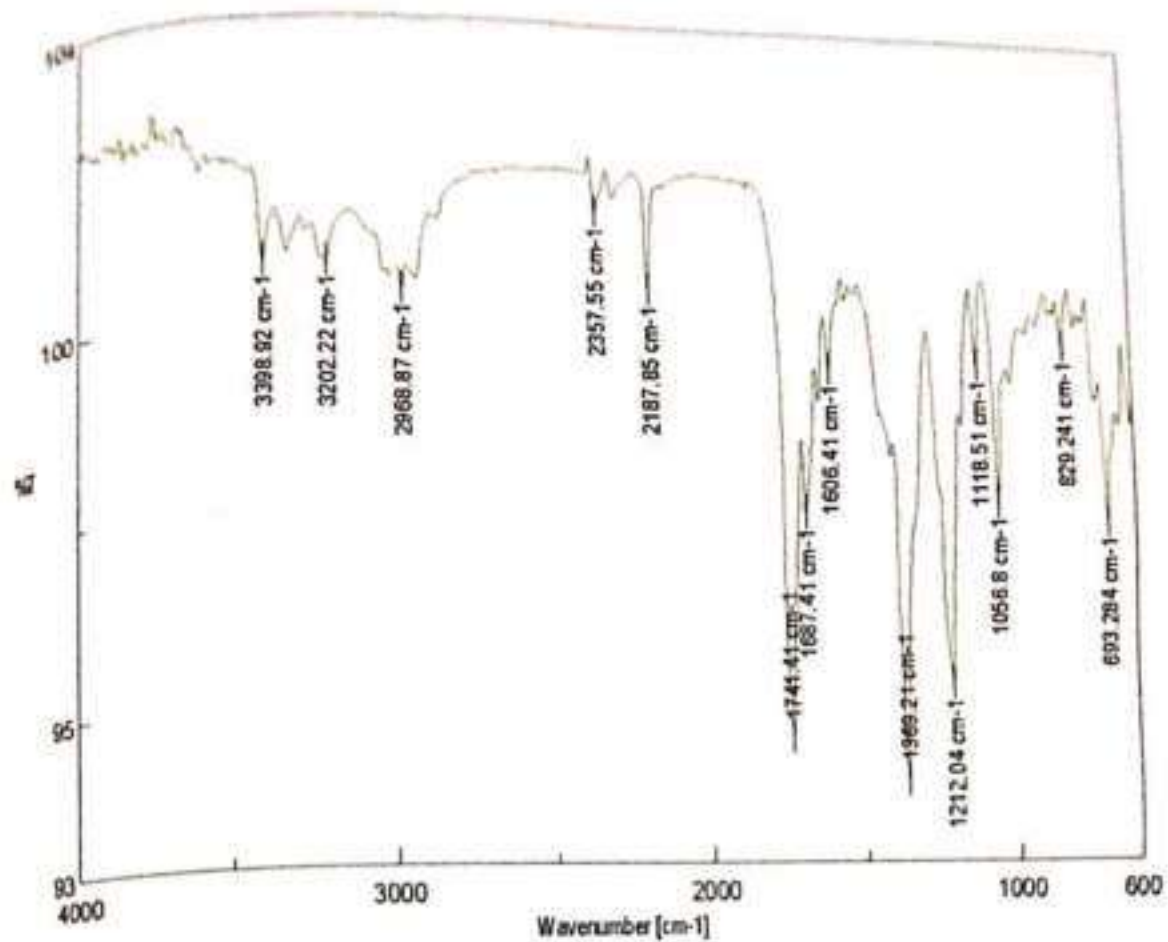
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 RC : 1.00



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 Comment  
 User  
 Division  
 Company

JAYSINGPUR COLLEGE, JAYSINGPUR

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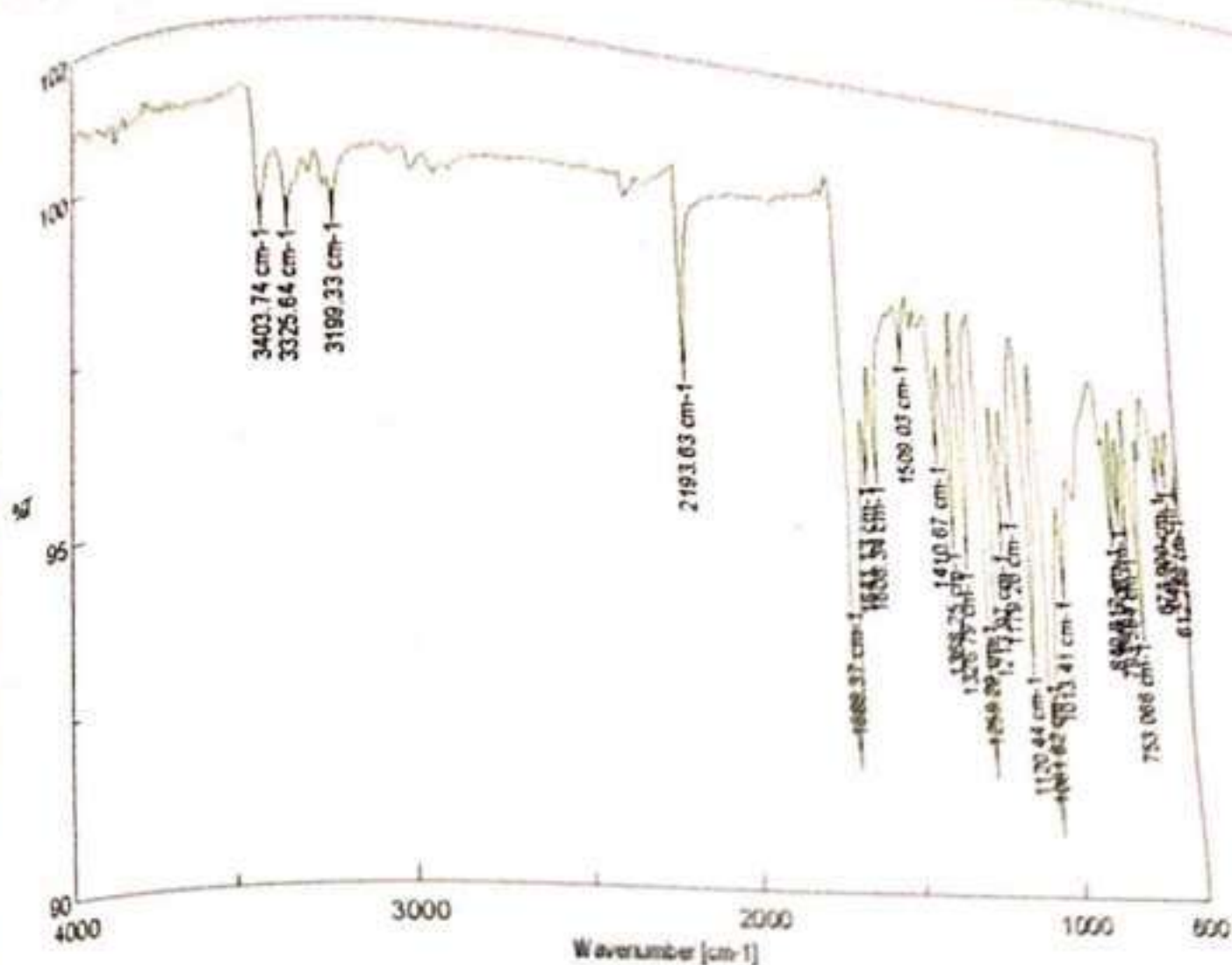
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 Comment  
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 Company

JAYSINGPUR COLLEGE, JAYSINGPUR

Memory-10

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**Vivekanand College (Autonomous), Kolhapur.**  
**Department of Physics**  
**M.Sc. II (2021-2022)**  
**Project Title**

Roll No	PRN No	Name	Project Title	Guide
1621	2020131352	Girish Suresh Adake	Preparation of Ni <sub>0.8</sub> Cd <sub>0.2</sub> Fe <sub>2</sub> O <sub>4</sub> by sintering method	Dr. M. M. Karanjkar
1622	2020131331	Komal Jotiram Bhosale	Preparation of ZnFe <sub>2</sub> O <sub>4</sub> by microwave auto combustion method	Mr. S. V. Malgaonkar
1623	2020131332	Priyarani Ravindra Burud	Preparation of Co <sub>0.1</sub> Zn <sub>0.9</sub> Fe <sub>2</sub> O <sub>4</sub> by microwave auto combustion method	Mr. S. V. Malgaonkar
1624	2020131333	Pratiskha Pandit Chougale	Preparation of Co <sub>0.2</sub> Zn <sub>0.8</sub> Fe <sub>2</sub> O <sub>4</sub> by microwave auto combustion method	Mr. S. V. Malgaonkar
1625	2020131334	Sunil Ratnakar Chougale	Synthesis and characterization of CuO thin film by SILAR	Mr. S. V. Malgaonkar
1626	2020131335	Rishikesh Tukaram Devtale	Synthesis and characterization of MnO <sub>2</sub> thin film by CBD	Mr. S. V. Malgaonkar
1627	2020131336	Pranav Shankar Ghosalkar	Synthesis and characterization of CuO thin film by Hydrothermal method	Mr. S. V. Malgaonkar
1628	2020131337	Gouri Govind Jadhav	Preparation of Co <sub>0.3</sub> Zn <sub>0.7</sub> Fe <sub>2</sub> O <sub>4</sub> by microwave auto combustion method	Mr. S. V. Malgaonkar
1629	2020131338	Manasi Khanderao Jagadale	MnO <sub>2</sub> thin film synthesis by electrodeposition technique	Dr. G. J. Navathe
1630	2020131339	Prasad Vilas Kamble	Preparation of Fe <sub>2</sub> O <sub>3</sub> thin film by SILAR method	Dr. G. J. Navathe
1631	2020131340	Snehal Narayan Mane	Synthesis and characterization of ZnFe <sub>2</sub> O <sub>4</sub> thin film by chemical bath deposition	Dr. G. J. Navathe
1632	2020131341	Priyanka Sanjay Patil	Synthesis and characterization of ZnO thin film by CBD	Dr. S. I. Inamdar
1633	2020131342	Shweta Shital Patil	Synthesis and characterization of ZnO thin film by CBD	Dr. S. I. Inamdar
1634	2020131343	Sujata Anandrao Patil	Synthesis and characterization of ZnO thin film by CBD	Dr. S. I. Inamdar
1635	2020131344	Bhagyashri Mahadev Pednekar	Preparation of MgZnFe <sub>2</sub> O <sub>4</sub> by combustion method	Dr. S. I. Inamdar
1636	2020131345	Prajyot Sunilkumar Pradnyasagar	Preparation of MgZnFe <sub>2</sub> O <sub>4</sub> by combustion method	Dr. S. I. Inamdar
1637	2020131346	Manisha Shivram Sawant	Preparation of Ni <sub>0.6</sub> Cd <sub>0.4</sub> Fe <sub>2</sub> O <sub>4</sub> by sintering	Dr. M. M. Karanjkar

			method	
1638	2020131347	Sadiya Mustafa Shaikh	Preparation of Mg <sub>0.8</sub> Zn <sub>0.2</sub> Fe <sub>2</sub> O <sub>4</sub> by sintering method	Dr. M. M. Karanjkar
1639	2020131348	Rutuja Subhash Shetti	Preparation of MgZn <sub>0.2</sub> Fe <sub>2</sub> O <sub>4</sub> by sintering method	Dr. M. M. Karanjkar
1640	2020131349	Swapnil Sakharam Shinde	Preparation of Ni <sub>0.5</sub> Cd <sub>0.5</sub> Fe <sub>2</sub> O <sub>4</sub> by sintering method	Dr. M. M. Karanjkar
1641	2020131350	Neha Sunil Thorat	Preparation of Mg <sub>0.4</sub> Zn <sub>0.6</sub> Fe <sub>2</sub> O <sub>4</sub> by sintering method	Dr. M. M. Karanjkar
1642	2020131351	Yogita Vishnu Zirange	Preparation of CdFe <sub>2</sub> O <sub>4</sub> by sintering method	Dr. M. M. Karanjkar

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# PREPARATION OF CADMIUM FERRITE USING SINTERING METHOD

A Dissertation Report Submitted to



Vivekanand College Kolhapur,  
(Autonomous).

For the Partial Fulfillment of  
Degree of Master of Science

In

PHYSICS

Under the Faculty of Science

By

Miss. YOGITA VISHNU ZIRANGE  
( B.Sc. )

Under the Guidance of  
Prof. M.M. Karanjkar sir  
M.sc. Ph.d

Department of Physics,  
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(Autonomous).  
2021-2022

### DECLARATION:-

I hereby declare that , the project entitled "**PREPARATION OF CADMIUM FERRITE USING SINTERING METHOD**" completed and written by me has not previously formed the basis for the award of any Degree or Diploma or other similar title of this or any other University or examining body.

Place : Kolhapur

Date : 29/6/2022



Miss. Yogita Vishnu Zirange  
M.Sc. II (Physics )  
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Kolhapur, ( Autonomous).  
2021-2022

## CERTIFICATE:-

This is to certify that the project entitled "**PREPARATION OF CADMIUM FERRITE USING SINTERING METHOD**" which is being submitted herewith for the award of the Degree of Master of Science in Physics of Vivekanand College (Autonomous), KOLHAPUR, is the result of the original project work completed by **Miss. YOGITA VISHNU ZIRANGE** under our supervision and guidance and to the best of our knowledge and belief the work embodied in this project has not formed earlier the basis for the award of any Degree or similar title of this or any other University or examining body.

Place : Kolhapur

Date :

**Project Guide**

Prof. Dr. M.M. Karanjkar  
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## CHAPTER:-1

### INTRODUCTION TO FERRITES:-

#### HISTORY OF FERRITES:-

The first type of magnetic material known to man was in the form of lodestone, comanating of the ore magnetite ( $\text{FeO}$ ). This is believed to have been discovered in ancient Greece and the time period of 800 BC. Magnets found their first application in compasses, which were used in the ninth century by the Vikings, or perhaps even earlier.

A milestone in the history of magnetism was the work done by William Gilbert in 1600. His work "De Magnete, Magneticque Corporibus, et de Magno Tellure" described the magnets properties of lodestone up to that point in time. It was not until two hundred years later that major developments began to occur. These developments included work done by Hans Christian Orsted, Andre Marie Ampere, Wilhelm Eduard Weber, Michael Faraday, Pierre Curie, and James Cleck Maxwell. Their work provided the basis of electromagnetic theory in general and for crystal structures.

In 1947, J.L. Snoeck published the book, New Developments in Ferromagnetic Materials. Studies done by Snoeck and others at Phillips Laboratories in the Netherlands led to magnetic ceramics with strong magnetic properties, high electrical resistively, and low relaxation losses.

At about the same time, in 1948, L. Neel announced his celebrated theoretical contribution on ferrimagnetism. This dealt with the basic phenomenon of "spin-spin interaction taking place in the magnetic sublattices in ferrites. The stage was now set for the development of microwave ferrite devices.

In 1952, C. L. Hogan from Bell Labs made the first non-reciprocal microwave devise at 9 GHz that was based on the Faraday rotation effect. Research was completed to improve the properties of the spinel ferrite materials by various cation substitutions. This modified the magnetic properties for different frequency ranges, power requirements, and phase shift applications.

In 1956, Neel, Bertaut, Forrat, and Pauthenet discovered the garnet ferrite class of materials. This type of ferrite material has three sub lattices, and is also referred to as rare-earth iron garnets. These materials, although having a magnetization lower than in spinel ferrite, possess extremely low ferromagnetic line width. Another class of ferrite material that was developed during this time is the hexagonal ferrite. These materials have three basic sub lattices combined in different numbers in a hexagonal structure. The high anisotropy fields have been utilized in microwave ferrite devices in the millimeter range.

In 1959, Smit and H.P.J. With published a comprehensive book on ferrite materials entitled Ferrite Developments have been made on the magnetic characteristics of ferrite materials since the 1950s that have improved microwave device performances. These involve both compositional and processing modifications. New application of ferrite materials continue to be realized, such as in the cellular phone, medical, and automotive markets.

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## CHAPTER:- 2

### METHODS OF PREPARATION AND SYNTHESIS:-

#### INTRODUCTION:-

In this chapter we studied about sintering method, synthesis of cadmium ferrite by sintering method and some other methods of preparation ferrites. We can prepare ferrites by various type like sol gel method, microwave assisted method, and so many methods are available.

#### SINTERING METHOD:-

The sintering process has been widely used in producing powder metallurgy part and ceramic component. Sintering is the process of compacting and forming solid mass of material by heat. The atoms in the materials diffuse across the boundaries of the particles, fusing the particles together and creating one solid piece. Generally, sintering processes can be divided into two types solid state sintering and liquid phase sintering.

Sintering is the term used to describe the consolidation of the product during firing. Sintering gives strength to the shaped powders by joining the particles into an aggregate. During sintering, interparticle bond reduces the surface area, which in turn lowers the surface energy. The bonds grow by various mechanisms that occur at the of the sintering systems involve. The term liquid phase sintering describes the sintering process, in which a portion of the material which is being sintered, is in liquid state. The formation of liquid phase during sintering significantly increases the sintering rate and enhances the densification by particle rearrangement under the influence of capillary force and filling atomic level. For many metals and ceramics the bonding details of solid state sintering theory. Solid state sintering is usually employed in the case of single phase material many of pores. Micro structural change during sintering takes place normally in three stages. Outlines the classic stages of sintering that represents the geometric progression involved in transforming the powder compact into a strong and dense component. Sintering usually occurs at temperature in excess, approximately one-half of the absolute melting temperature.

In the first stage of the sintering, the formation of grain boundaries causes the particles to join together. The degree of bonding in the initial stage ranges from point contact to highly deformed interface. The intermediate stage is the most important stage for densification and hence determines the properties of the sintered compact: The growing of neck is the focus of the initial stage of sintering. It loses its identity in the intermediate stage and the attention shifts to

### SYNTHESIS OF CADMIUM FERRITE ( CdFe<sub>2</sub>O<sub>4</sub> ) :-

Cadmium carbonate and ferric oxide red (Fe<sub>2</sub>O<sub>3</sub>) for making of cadmium ferrite (CdFe<sub>2</sub>O<sub>4</sub>). There are two types of synthesis one is dry process and other is wet process. Here we only prefer dry process. We took (CdCO<sub>3</sub>) according to Ni<sub>x</sub> Cd<sub>1-x</sub> O<sub>3</sub> here, x=0. From this calculation we took appropriate weight of CdCO<sub>3</sub> and Fe<sub>2</sub>O<sub>3</sub> into the mortar for the milling by adding some acetone. The milling process is only for the mixing the material very well. After the milling process the material were pre-sintered in muffle furnace at 800°C for 6hrs and we got pre-sintered CdFe<sub>2</sub>O<sub>4</sub>. After the pre-sintered process material was re-milling and again sintered material in furnace at 1150°C 24hrs after that re-milling the mean made fine and send to characterization like XR, SEM, FT-IR.

### SOL GEL METHOD:-

Ferrous make on large scale of magnetic oxides with its structural, electrical, and magnetic properties. These properties depend on the method of preparation. In all over the methods sol method have many advantages to obtain the nano particles of ferrite. By using sol gel method we make the size of ferrites in the form of nano crystalline powder, nanowires, nano tubes, nano ribbon. Sol is a chemical method. Preparation of powder ferrite nano particles by sol gel method usually recognized as sol gel auto combustion metal ions and using suitable fuel like urea, citric acid, are used at the starting materials owing to their easy solubility in water.



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## CHAPTER :-4

### CHARACTERIZATIONS :-

In this chapter we studied general information about characterization XRD, SEM, FTIR

### XRD (X RAY DIFFRACTION):-

X-ray diffraction has a milestone of twentieth-century science. Its development has catalyzed the developments of solid state science and much of our understanding of chemical bonding. X-ray powder diffraction (XRPD) plays an important role in materials research and development because many materials and minerals are not readily available in single-crystal form. Some 10000-20000 powder diffractometers are in use worldwide, and of the order of 160000 powder patterns are available in the Powder Diffraction File (PDF) electronic database. Although the technique stored powder diffraction, any polycrystalline specimen may be studied using the technique, including metals, thin films, and powders.

A typical x-ray powder diffraction pattern consists of diffraction peaks as a function of the diffraction angle,  $2\theta$ . Diffraction occurs when waves scattering from an object constructively and destructively interfere with each other. The diffraction peaks are a result of constructive interference of waves scattered from the atoms or ions composing a crystal. X-rays diffract from the periodic arrangement of atoms in a crystal, exactly analogous to the diffraction of visible light from a grating. Based on the work of von Laue, W. H. and W. L. Bragg showed in 1913 that diffraction from a crystal is described by the equation now known as Bragg's law:  $n\lambda = 2d \sin \theta$ . This equation allows one to measure the perpendicular distance ( $d_{hkl}$ ) between imaginary planes which form parallel families and which intersect the repeating unit cell filled with atoms in a way described by the Miller indices ( $hkl$ ). X-rays of wavelength  $\lambda$  may be thought of as reflecting from these imaginary planes at the measurable angle, where  $\theta$  is one-half of the diffraction angle. A powder pattern therefore contains a set of diffraction peaks at  $2\theta$  positions that correspond to the interplanar spacings in the crystal. Although  $d_{hkl}$  may be calculated for any set of ( $hkl$ ) planes in any unit cell using geometry, the interplanar spacings are most easily calculated in reciprocal space. P. P. Ewald developed what is by far the most useful method for describing diffraction phenomena using reciprocal space. Ewald in 1913 showed that a reciprocal lattice can be constructed by using the reciprocals of all of the distances in a real unit cell.

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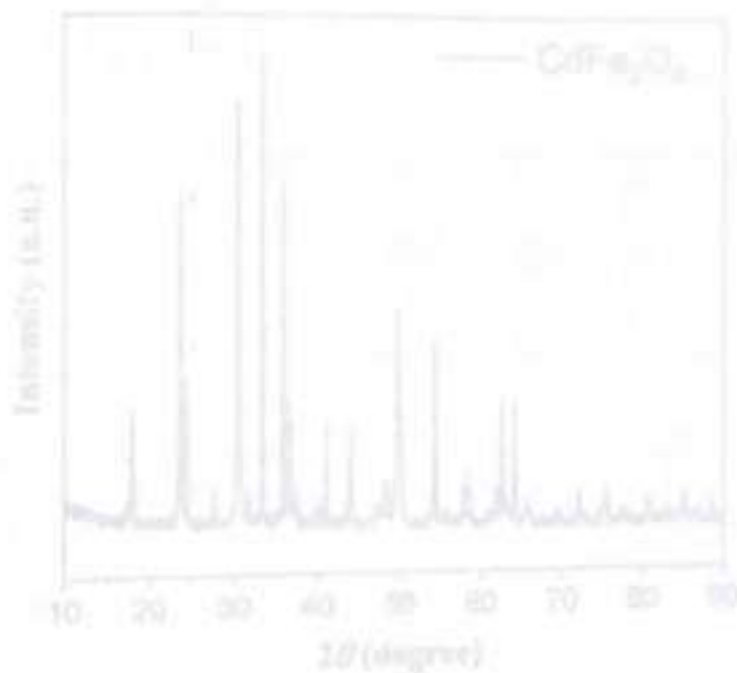


Fig. (v) XRD



## CHAPTER :-5

### RESULT:-

The figure shows XRD pattern of cadmium ferrite (odeo) by sintering method. The analysis of diffraction pattern by using (311) (220) (511) planes confirms the formation of spinal structure. The given XRD pattern compared with JCPDS card no. 22-1065 from this XRD pattern it is confirm the cadmium ferrite (cdfe2O4).

### XRD:-

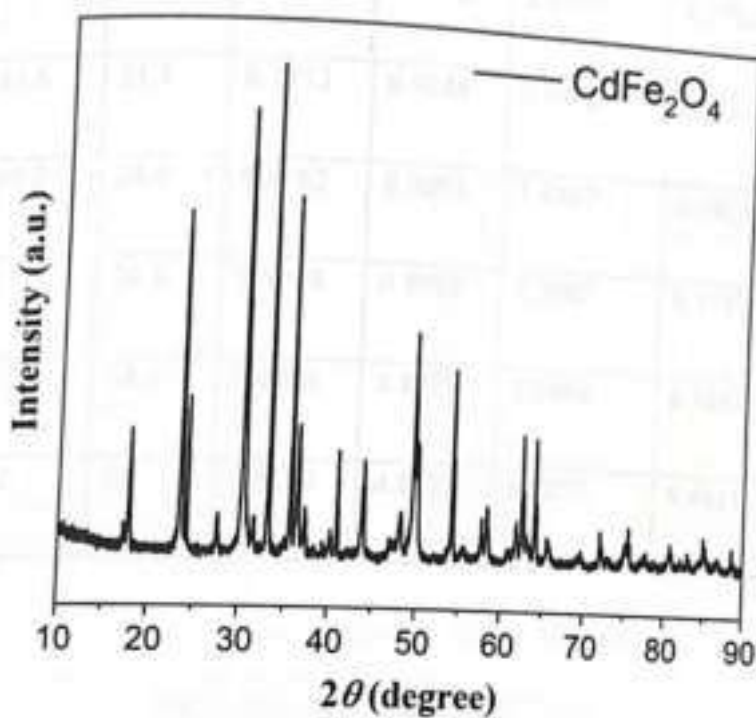


Fig: (a) XRD

## CALCULATIONS :-

Obs No.	(hkl)	2 $\theta$	$\theta$	Sin $\theta$	Cos $\theta$	$d = \lambda/2\sin\theta$	$a = d\sqrt{h^2+k^2+l^2}$	$D = 0.9 \lambda/\beta\cos\theta$
1	220	30.4	15.2	0.2621	0.9650	2.9389	8.3124	0.01596
2	310	32.8	16.4	0.2789	0.9593	2.7619	8.7339	0.01605
3	311	35.2	17.6	0.3023	0.9531	2.5481	8.4511	0.01616
4	321	40.8	20.4	0.3485	0.9372	2.2103	8.2702	0.01643
5	400	43.6	21.8	0.3713	0.9284	2.0746	8.2984	0.01659
6	421	49.2	24.6	0.4162	0.9092	1.8507	8.4813	0.01994
7	422	53.6	26.8	0.4508	0.8925	1.7087	8.3710	0.01726
8	511	57.2	28.6	0.4786	0.8779	1.6094	8.3631	0.01754
9	440	62	31	0.5150	0.8571	1.4957	8.4611	0.01797

Grain size = 418 nm

Grain size = 511 nm

Avg. Grain size = 557 nm

The effect of annealing on the grain size and the shape of the crystallites was studied. The results are shown in Figure 1. It is seen that the grain size increases with increasing annealing temperature. This is due to the fact that the grain boundaries migrate and coalesce. The migration of grain boundaries leads to the coarsening of the sample which results in the improved optical quality of the film.

## CHAPTER 6

### SUMMARY AND CONCLUSION:-

The cadmium ferrite (CdFe<sub>2</sub>O<sub>4</sub>) powder was successfully prepared by sintering method. The powder is characterized by XRD, SEM. The properties of ferrite prepared by sintering method compared with other methods of preparation.

In this project we studied preparation of cadmium ferrite (CdFe<sub>2</sub>O<sub>4</sub>) by sintering method. In chapter 1 we discussed about introduction of ferrites, history of ferrites, magnetization, application of ferrites and cadmium ferrite (CdFe<sub>2</sub>O<sub>4</sub>). In chapter 2 we discussed about sintering method and other types of preparation of ferrites and synthesis of cadmium ferrite. After that in chapter 3 there was literature survey. In chapter 4 of characterization includes general information about XRD (x-ray diffraction) SEM (scanning electron microscope) described what a XRD SEM. And finally in the last chapter we discussed about result and conclusion. The XRD pattern and SEM morphology. The results confirm the synthesized material.

### PROPOSALS FOR FUTURE RESEARCH:-

Our work does not end here. The implementation of the nanoscopic techniques pave new ways and create highly interesting in the nanomaterials field. The most direct application will be the analysis of samples obtained with new and more "exotic" materials and study the new characteristics of the nanomaterials. In this way, we have started to prepare and characterize new samples made from different metal oxide semiconductor powders by microwave and solution combustion method. Further research effort should be made to enhance the understanding of additional characteristics of the multi-component of Nickel Zinc Ferrite. The detailed study of additional experimental parameters had significant effect on the nanomaterial properties such as various powers of microwave heating and the different treated temperatures in various other atmospheres.





"Education for Knowledge, Science, and Culture"  
- Shikshanmaharshi Dr. Bapuji Salunkhe  
**Shri Swami Vivekanand Shikshan Sanstha's**  
**Vivekanand College, Kolhapur**  
**(Autonomous)**



**M.Com. II Student Projects 2021-22**

Sr. no.	Name of the Student	Title of the Project
1	HARSHA MANOHAR WADHWANI	FINANCIAL STATEMENT ANALYSIS OF ADARSH BHIMA VASTRAM PVT.LTD.
2	MR. KUNAL BABASAHEB HAJARE	STOCK MARKET :- STUDY OF AWARENESS AND PORTFOLIO MANAGEMENT AMONG COMMON INVESTORS IN JAYSINGPUR
3	MISS. CHAITRA RAGHAVENDRA MUJUMDAR	A STUDY OF CAPITAL STRUCTURE WITH SPECIAL REFERENCE TO SHREE RENUKA SUGARS LTD.
4	MISS. SHWETA ABHINANDAN SHINDE	A STUDY ON CRITICAL ANALYSIS OF FINANCIAL STATEMENTS OF MAHALAXMI ENTERPRISES ,GOKUL SHIRGAON M.I.D.C
5	MISS. SHRUTI UNMESH DOSHI	GROWTH OF ONLINE STOCK TRADING AND ITS CHALLENGES
6	MISS NIKITA SAKHARAM DINDE	A STUDY OF FINANCIAL PERFORMANCE USING RATIO ANALYSIS
7	MISS. PUSHPA PRAKASH GURAV	A STUDY ON COMPENSATION MANAGEMENT WITH SPECIAL REFERENCE TO PADMABHUSHAN KRANTIVEER DR. NAGNATH ANNA NAYAKAWADI HUTATMA KISAN AHIR SAHAKARI SAKHAR KARKHANA, WALWA
8	MISS ASAWARI ANIL JAGDALE	A STUDY ON CAPITAL BUDGETING WITH SPECIAL REFERENCE TO ANIL MILK PRODUCTION , MANGAON
9	MISS SHIVANI BALASO MHARUGADE	A STUDY ON FINANCIAL PLANNING OF MUTUAL FUND INVESTORS WITH REFERENCE TO ADITYA BIRLA SUN LIFE
10	MISS RABIYA JAMILUDDIN JAMADAR	CONSUMER BEHAVIOUR TOWARDS D-MART

11	MR. MANTHAN SUBHASH SHEWALE	A STUDY ON PROMOTIONAL ACTIVITIES AND IMPACT OF PROMOTIONAL ACTIVITIES ON SALE AND CONSUMER PURCHASE DECISION WITH REFERENCE TO LAXMI SALES SEERVICES ,KOLHAPUR
12	MISS. SHIVANI SURESH PATIL	A STUDY OF FINANCIAL PERFORMANCE WITH REFERENCE TO SHIVSAI SAHAKARI PHALE-PHULE, BHAJIPALA,PANAN SANSTHA MARYADIT ITKARE
13	MISS. MANASI MAHAVIR HALURE	A STUDY ON FINANCIAL PLANNING OF MUTUAL FUND INVESTORS WITH REFERENCE TO ADITYA BIRLA SUN LIFE
14	MISS. PRIYANKA SUNIL KOLI	A STUDY ON RATIO ANALYSIS WITH SPECIAL REFERENCE TO SHREE CHATRAPATI SHAHU KRUSHI SAHAKARI KHAREDI VIKARI SANGH, KAGAL
15	MISS. MUSKAN KHALIL MOMIN	A STUDY OF ANALYSIS OF DEPOSITS & LOAN SCHEMES WITH SPECIAL REFERENCE TO " DR ANNASAHEB CHOUGULE URBAN CO.OP.BANK.LTD, PETH WADGAON , BRANCH - HATKANANGALE".
16	MR. MANTHAN SUBHASH SHEWALE	ANALYSIS OF PROFITABILITY, LIQUIDITY AND SOLVANCY POSITION OF RELIEF BIOSCIENCE PHARMA.PVT.LTD.KOLHAPUR
17	MR. SAGAR BALAJI WAGHMARE	A STUDY OF NON - PERFORMING ASSETS WITH SPECIAL REFERENCE TO " THE DOMBIVALI NAGARI SAHAKARI BANK LTD.
18	MISS RADHA MAHESH KSHIRSAGAR	TO STUDY THE PERFORMANCE ANALYSIS OF ENINETECH LLP CASTING PVT.LTD.
19	MISS. SANYOGITA SANJAY SHIVANGEKAR	A STUDY ON INVESTMENT PATTERN OF GOVERNMENT AND PRIVATE SECTOR SALARIED EMPLOYEES WITH SPECIAL REFERENCE TO KOLHAPUR CITY
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46	MISS VIDYA MADHUKAR PISHTE	A STUDY OF LOAN SCHEME WITH SPECIAL REFERENCE TO BANK OF MAHARASHTRA LTD, RAJARAMPURI, KOLHAPUR
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**Mr. Sunny Kale**

**Head,**

**Department of Commerce**



A  
PROJECT REPORT  
ON

**“TO STUDY ON COMPARISON OF EQUITY SHARES AND  
OTHER INVESTMENT OPTIONS”**

SUBMITTED TO  
**VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)**

FOR THE PARTIAL FULFILMENT OF THE DEGREE OF  
**MASTER OF COMMERCE**

SUBMITTED BY  
**MISS.KAJAL RAJKUMAR SUKHANI**  
(B.COM)

UNDER THE GUIDANCE OF  
**MR.U. D. DABADE**  
(M.Com, M. Phil, SET, G.D.C & A, Ph.D. (APP))

**DEPARTMENT OF COMMERCE**  
**VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)**  
**KOLHAPUR – 416 003**

**2021-22**

*Assessed*  
*[Signature]*  
*30-3-22*



## DECLARATION

I undersigned hereby declare that the project untitled "**TO STUDY ON COMPARISON OF EQUITY SHARES AND OTHER INVESTMENT OPTIONS**". Is a original work prepared by me under the guidance of Mr. U. D Dabade (Assistant Professor Department of commerce Vivekanand College Kolhapur (Autonomous). The findings in this report are based on the data collected by me. The matter included in this report is not a reproduction from any other sources.

I also hereby declare that this project has not been submitted any time to any other University or institutions for the award of any degree or diploma.

DATE: 30/03/2022

PLACE: Kolhapur



Miss. Kajal Rajkumar Sukhani

(Research Student)

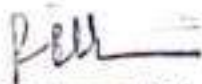
## CERTIFICATE BY COORDINATOR


This is to certify that the project report entitled "TO STUDY ON COMPARISON OF EQUITY SHARES AND OTHER INVESTMENT OPTIONS". Submitted by Miss Kajal Rajkumar Sukhani, in partial fulfillment of the degree leading to "MASTER OF COMMERCE" submitted to the Vivekanand College, Kolhapur has been completed under the guidance of Mr. U. D Dabade (Assistant Professor Department of commerce Vivekanand College Kolhapur (Autonomous) To the best of my knowledge and belief the work and the matter presented here is original and has not been copied from any other degree or diploma of any other degree of Vivekanand College, Kolhapur or any other college.



DATE: 30/03/2022

PLACE: Kolhapur

  
PRINCIPAL  
Vivekanand College  
Kolhapur (Autonomous)


  
Mr. S.S. Kale,  
(Coordinator)

## **CERTIFICATE BY GUIDE**

This is to certify that the project report entitled **“TO STUDY OF EQUITY SHARES AND COMPARISON TO OTHER INVESTMENT OPTIONS”** submitted to Vivekanand College, Kolhapur (Autonomous) for the partial fulfillment of the degree **“MASTER OF COMMERCE”** is an independent research work carried out by Miss. Kajal Rajkumar Sukhani under my supervision and guidance. To the best of my knowledge and belief this is not been previously submitted for the award of any other degree or diploma of Vivekanand College, Kolhapur or any other College.

DATE: 30/03/2022.

PLACE: Kolhapur

  
**Mr. U. D. DABADE**  
(PROJECT GUIDE)



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DATE: 30/03/2022

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## **CHAPTER 1**

### **INTRODUCTION AND RESEARCH DESIGN**

**1.1 INTRODUCTION**

**1.2 STATEMENT OF THE PROBLEM**

**1.3 OBJECTIVE OF THE STUDY**

**1.4 RESEARCH METHODOLOGY**

**1.5 SIGNIFICANCE OF THE STUDY**

**1.6 SCOPE OF THE STUDY**

**1.7 LIMITATIONS**

**1.8 CONCLUSION**



**CHAPTER 1**  
**INTRODUCTION AND RESEARCH DESIGN**

**1.1 INTRODUCTION:**

The project will be based on equity shares by the companies. A stock market, equity market or stock market is an aggregation of buyers and sellers of stock or shares. In stock market, the securities are listed on public stock exchange as well as stock that is traded privately of private company through crowd funding platform. Stock market provide an option to invest in high risk and to earn high return on investment. But then, general principle of encountering greater risk and uncertainty one can acquire high return on it's investment.

Investment is usually made with an investment strategy in mind. Investment in stock market is most often made through stock brokerages and electronic trading platforms. Due to high risk and uncertainty, securities and exchange board of India (SEBI) come into the picture. The securities and exchange board of India (SEBI) is the regulatory authority established under the SEBI Act 1992 and its primary functions are

- Protecting Investors Interest.
- Promoting and regulating the Indian securities markets by inspection of books of account, compelling companies in list and registration of brokers.

Mainly, the investment is made to mobilize the savings of the individual, because of allocation and getting high return on investment feature of the share market, it is more preferable.

There are other investment options in India which differ from equity shares features. And they are more safe and favorable as compared to equity shares. This options are more popular and are given equal preference.

Some of this popular options of investments are provided by the government. The main objective behind some investment options provided by government is to provide safe investment with regular return on investment. The ultimate motto of investment is to serve both the parties. I.e., Investor and Investee.

- Investor:- through investing investor earn profit/ interest.
- Investment:- through investment investee get the capital for its Business.

**1.2 STATEMENT OF THE PROBLEM:**

1. How does the stock market work and create investment opportunities?
2. What is the concept of investment in equity shares?
3. What are other investment options available to investors?
4. Which option is safer and can get higher returns?

### **1.3. OBJECTIVES OF STUDY:**

The main objective of carrying out this project was to understand the concept of equity shares and its working.

The study aim to cover the following:

1. To study various popular investment options.
2. To understand the factors influencing the investment decisions.
3. To make suggestions on respective issues.

### **1.4. RESEARCH METHODOLOGY:**

Research methodology concerns itself with obtaining information through empirical observation that can be use to systematically developed logically related propositions so as to attempt to establish cause of relationship among variables. Methodology of the study refers to the methods used to collect the require data for research work. The data required has been collected from following sources:-

#### **➤ PRIMARYDATA:**

Primary data refers to the first hand data gathered by the researcher himself. In other words primary data is first hand information collected through questioners with investors.

#### **➤ SECONDARY DATA:**

Secondary data is that which is already collected by someone for some purpose and is available for present study. The present project report is prepared by analysis of various reports which include published sources like:-

1. Report presented by university professor.
2. Websites.
3. Reference from research papers.
4. Reference from the books.

### 1.5 SIGNIFICANCE OF THE STUDY:

1. This study is significant to understand the share market.
2. This study is significant to have better knowledge of equity shares and its other areas.
3. This study improve the critical evaluation of investment.
4. This study helps to have better investment strategy.

### 1.6 SCOPE OF THE STUDY:

#### 1. Geographical scope:

The Geographical scope of the study was limited to the Maharashtra.

#### 2. Topical scope:

The topical scope of the study was be to focus on comparison of equity shares and other investments options.

#### 3. Functional scope:

The functional scope covers fulfillment of the objectives set out and offer some meaningful suggestions regarding equity shares and other investments options.

#### 4. Analytical scope:

The analytical scope was confined to analyze the equity shares investment and other investments options.

#### 5. Periodical scope:

The periodic scope was limited to year between 2021-22.

### 1.7 LIMITATIONS OF THE STUDY:

There are various constraints that could be faced during the span of the project which will affect the outcome of the project and thus such constraints will have to be taken into consideration, they are as follows:

1. Limited area of study. The study was undertaken of equity share and other investment options only.
2. The data collected was of limited period, i.e., 2021-22.



### **1.8 CHAPTER SCHEME:**

#### **Chapter I –Introduction and research methodology:**

Chapter first includes introduction to study, statement of the problems, significance of the study, objectives of the study, scope of the study, methodology adopted, Chapter scheme and conclusion.

#### **Chapter II- Review of literature:**

This Chapter covered the reviews related to equity shares phenomenon.

#### **Chapter III- Conceptual framework:**

This Chapter covered various concept related to comparison of equity shares and other investment options.

#### **Chapter IV- Data Analysis and Interpretation:**

This Chapter covered the analysis and interpretation from secondary data such as reports and articles.

#### **Chapter V- conclusion:**

This Chapter covered suggestions and conclusion drawn from analysis.

### **1.9 CONCLUSIONS:**

This Chapter consisted of introduction, statement of the problems, objectives of the study, research methodology adopted and conclusion. In the next chapter theoretical framework has been presented.

#### **❖ REFERENCE:-**

- **Books:-**

1. Books: book of stock to riches by parag parikh.
2. Books of bulls, bears, and other beasts by santosh nair.
3. Books of Research methodology by C. R. Kothari.

- **Others:-**

- 1 Report on (Issue of equity shares) from prof.ajaya assistant professor from GFGC Mudipu.
- 2 Reference from projects on study on financial planning of mutual Fund investment with special reference to Aditya Birla sun life.



## **CHAPTER 2**

### **REVIEW OF LITERATURE**

**2.1 INTRODUCTION**

**2.2 REVIEW OF LITERATURE**

**2.3 CONCLUSION**

**2.4 REFERENCE**

## CHAPTER 2 REVIEW OF LITERATURE

### 2.1 INTRODUCTION:

A literature review is a summary of studies related to a particular area of research. It identifies and summarizes all the relevant research conducted on a particular topic. A literature review is a written work that performs a through "re" view, "overview" or "look" against of past and current works on a subject, issue or theory. From the analysis, the writer then offers an overview of the current status of a particular area of knowledge from both practical and theoretical perspective. A number of studies have been conducted on equity shares and investments. Some worthwhile studies relating to the present topic are reviewed here.

### 2.2 REVIEW OF LITERATURE

1. Anita and Deepak (2020), in the research paper they have compared and analyzed the equity fund scheme and Mutual fund scheme in respect of risk and return. On the bases of finding they stated that equity shares have higher risk with high return and mutual funds schemes have lower risk with lower return. They concluded that return should not be lower and both are subjected to market risk.
2. Arun and Rohit (2017), in their study report, they have studied the concepts like investment, investment options, preferences of investors, so much and so forth. In its research they concluded that investors are now more focusing on safety, reliability and return on investment. And bank deposits are more preferable because of its safety.
3. Jayashree, Ranjit and kajol (2020), they studied the awareness among the investors, determinants and impact of awareness of investment among the investors. After studying whole concept they concluded that understanding the risk perception of individual, policy makers can take steps to improve their risk perception for better investment culture.
4. Mrs.s.nirmala and Geeta (2018), in the research paper the survey was conducted by which they concluded that there should be awareness among the investors for avoiding risk and for better return on investment. In survey they founded that major problem with investors is lack of awareness and alertness.
5. P.srinivasan (2012), in his journal he studied fundamental determinants of share price in India. The findings revealed that the dividend per share has a negative and significant

- impact on the share prices and also mention size is being a significant factor in determining the share prices of alligators under consideration except manufacturing.
6. Ramesh H. M (2014), the paper proposes to study the behavior of individual investors in the stock markets and the factors that influence their investment decisions. In findings they included awareness level, investment duration etc. And also spoke about the income level of an individual, also decide the investment pattern of the investor. And end they concluded, all the determinants found in research influence the investments.
  7. Reena rai (2014), the paper under study aims to study the factors influencing an investors decision making behavior on basis of related studies. It states that the various factors that influence include various demographic factors such as gender, Age, education. Finally, it concluded that out of the various factors affecting behavior of investors some factors have a slight role which some majorly impact investor behavior. The general factors being gender, age, confidence levels, cognitive bias, risk factors, company's performance.
  8. Sanjeet Sharma (2011), the study aims at studying the relation between the equity share prices and related variables such as book value of shares, earning per share (EPS), dividend per share (DPS) and dividend payout etc. The study reveals that (EPS) and (DPS) are the strongest determinants of market price, and therefore the study suggests a liberal dividend policy as a good measure of attracting the investors, gaining their confidence and thereby, increasing the valuations of the company
  9. Anju Bala(2013), the research paper has explained the logistics involved into the working of the stock market and the investors preferences of selecting stock market as a tool of investment .Depending on the study, they recommended the listing of stock prices on multiple stock exchanges to improve liquidity and gain investors confidence.
  10. Rajeev jain (2012), in journal have stated that it's a fact that only few investors create immense wealth from a stock market and also manage to keep it for decades. These investors take the right decisions and for doing this one needs experience. But experience comes from bad decisions too. Investors who create wealth from equity markets and keep it for decades, at times for generations, do not panic when a market falls.



### 2.3 CONCLUSION:

Review of literature revealed the fact that this is an area where a large number of large number of studies had been conducted on equity shares and other investments options and even in the present scenario, lots of work regarding equity shares and other investments area is currently undergoing. The reviewed literature include studies of the equity shares and other investment options. Studies conducted time to time in different parts have indicated that equity shares is an important option of investment but other better options are available too in India.

### 2.4 REFERENCES

1. Anita and Deepak (2020). (A study on Performance Evaluation of Equity shares and Mutual funds), volume 5, page no 74-76.
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6. Ramesh H.M (2014). ( A study on Individual investors behavior in stock market of India) vol. 02, issue 02 page no 172.
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10. Rajeev jain (2012). (A study on Investor's attitude towards secondary market equity investments and influence of behavioral finance) by international journal on emerging technologies (Vol.3, issue 2) page 71-74.



**CHAPTER 3**  
**CONCEPTUAL FRAMEWORK:-**

- 3.1 Introduction.**
- 3.2 Meaning of equity shares.**
- 3.3 Features of equity shares.**
- 3.4 Advantages of equity shares.**
- 3.5 Disadvantages of equity shares.**
- 3.6 Procedure related to issue of equity shares.**
- 3.7 Other investment options available in India.**

## CHAPTER 3 CONCEPTUAL FRAMEWORK

### 3.1 INTRODUCTION:

Most of the companies are usually started privately by their promoters. However, the promoters capital and borrowings from banks and financial institutions may not be sufficient for setting up or running the business over a long period of time, especially when the business grows and looking for expansion.

In such case, the companies invite the public to contribute towards the equity and issue shares to individual investors. The way to invite share capital from the public is through a "Public issue". In simple words, a public issue is an offer to the public to subscribe to the share capital of the company.

Generally, equity shares are issued to the public to raise the capital required by a company. Once this is done, the company allots shares to the applications as per the prescribed rules and regulations laid down by SEBI. The leading share market in India is National stock Exchange of India Limited (NSE). In other words, NSE is the leading stock exchange in India, located in Mumbai, Maharashtra.

### 3.2 MEANING OF EQUITY SHARES:

Equity shares are the main source of finance of a firm. It is issued to the general public. Equity shareholders do not enjoy any preferential rights with regard to repayment of capital and dividend. They are entitled to the income of the company, but they enjoy the right to control the affairs of the business and all the shareholders collectively are the owners of the company.

### 3.3 FEATURES OF EQUITY SHARES:

1. Equity shares are permanent in nature, i.e., cannot be returned until the company decide to close its business.
2. Equity shareholders are the actual owners of the company and they bear the highest risk.
3. Equity shares are transferable, i.e., Ownership of equity shares can be transferred with or without consideration to other person.
4. Dividend payable to equity shareholder is an appropriation of profit.
5. Equity shareholders do not get fixed rate dividend.
6. Equity shareholders have the right to control the affairs of the company.

7. The liability of equity shareholders is limited to the extent of their investment.

### **3.4 ADVANTAGES OF EQUITY SHARES:**

#### **I. Advantages of the shareholders:-**

- a. Equity shares are very liquid and can be easily sold in the capital market.
- b. In case of high profit, they get dividend at higher rate.
- c. Equity shareholders have the right to control the management of the company.
- d. The equity shareholders get benefit in two ways, yearly dividend and appreciation in the value of their investment.

#### **II. Advantages of the issuing company:-**

- a. They are permanent source of capital.
- b. They do not have any obligation regarding payment of dividend.
- c. Larger equity capital base increases the creditworthiness of the company among the creditors and investments.

### **3.5 DISADVANTAGES OF EQUITY SHARES:**

#### **1. Disadvantages to the shareholders:**

- a. Equity shareholders get dividend only if there remains any profit after paying debenture interest, tax and preference dividend. Thus, getting dividend on equity shares is uncertain every year.
- b. Equity shareholders are scattered and unorganized, and hence they are unable to exercise any effective control over the affairs of the company.
- c. Equity shareholders bear the highest degree of risk of the company.
- d. Market price of equity shares fluctuate very widely which, in most occasions, erode the value of investment.
- e. Issue of fresh shares reduces the earnings of existing shareholders.

#### **2. Disadvantages to the issuing company:**

- a. Cost of equity is the highest among all the sources of finance.
- b. Payment of dividend on equity shares is not tax deductible expenditure.
- c. As compared to other sources of finance, issue of equity shares involves higher floatation expenses of brokerage, underwriting commission, etc.



### 3.6 PROCEDURE RELATED TO ISSUE OF EQUITY SHARES

The steps given below are followed in the public issue of shares:-

- 1) **Filing Prospectus:**  
The lead manager shall arrange to file the final prospectus with SEBI, Registrar of companies and stock exchange.
- 2) **Press Conference:**  
The Press conference / investor meet is arranged to announce the public issue of shares.
- 3) **Dispatch of Application Forms:**  
The Registrar to the issue shall arrange for the distribution of application forms to the bankers, brokers, etc.
- 4) **Opening of subscription list:**  
The Subscription list is kept open for minimum of 3 days and maximum of 7 days during which public can apply for the public issue of shares. The bankers accept the application along with money and inform the Registrar the status of response on a daily basis.
- 5) **Closure of subscription list:**  
The company announces the closures of public issue through the media. After closure, the bankers send the applications to the Registrar to the Issue.
- 6) **Allotment of shares:**  
The Registrar allots the shares in consultation with issuing company, SEBI and stock exchanges. The allotment is made to the demand account of the investors and refund of excess application money received is also undertaken.
- 7) **Listing of shares:**  
Finally, shares are listed in the stock exchanges where listing agreement is made and company informs the SEBI about the listing. Thereafter, regular trading in shares are undertaken.

### 3.7 Other investment options available in India:

Other than equity shares and share market, there are other investment opportunities in India which are safer, give various rate of return and have different features as compared to equity shares. Following are the most popular and most preferable investment opportunities:-

#### 1) Unit linked insurance plan:

- Unit-linked insurance plans are considered as one of the best investment options in India. The ULIP plans offer the dual benefit of insurance and investment. Besides, ULIP plans also provide the advantage that is tax exemption. ULIP plans arrive along with a lock-in period of 3 years-5 years. Under ULIP, a part of the premium is used for insurance coverage whereas the remaining premiums is invested in market linked instruments such as shares, bonds, much more. Features are as following:-
- Investing in a ULIP is flexible as it provides the investor with the bandwidth to invest as per the risk appetite.
- ULIPs are a long-term investment and help investor to get maximum returns.
- ULIP let's you avail tax-free maturity.

#### 2) Public provident fund:

One of the most secured long-term term investment option amongst all the investment options in India. It is tax-free.

A PPF account can be opened in a bank or post office. The invested money is locked for the tenure of 15 years. Moreover, in this investment option, you can earn compound interest on the accumulated money. You can also extend the time frame for the next five years. The only drawback of having a PPF account is that you can withdraw the invested money by the end of 6<sup>th</sup> year.

PPF Interest rate from 2016-2022:

Financial year	Interest rate
2016-2017	8.10
2017-2018	7.60
2018-2022	7.60



Features are as following :-

- PPF, being a government-backed scheme, PPF the principal along with the interested amount in the PPF account is safe and guaranteed.
- Upon the investment, it has a lock in period of 15 years. The lock in period can also be extended up to 5 years. On an annual basis, the minimum premium amount to be invested is Rs 500 up to Rs 1.5 lakhs.
- PPF also provide the benefit of availing loans against the amount of investment

### 3) Mutual fund:

- One of the prominent investment options in India Mutual funds is the ideal investment plan that offers high return on the investment over the long-term. It is a market linked investment alternatives, which invests money in various financial instruments such as equity, debt, stocks, money market funds and much more. The results are generated as per the market performance of the fund. Even though the risk exposure in mutual fund investment is higher, it offers much better returns as compared to other best investment options in the market. Features are as following :-
- Every mutual fund scheme has an allocated fund manager who helps you to choose a lucrative investment for the scheme.
- Investment in usually fund schemes are also beneficial as you are exempted from the wealth tax.
- Investment in mutual funds is transparent, which help the investor to make an informed decision.

### 4) Bank fixed deposits:

Fixed deposits are exceptionally well known as fixed pay venture choices. Consistent with its name, FD offers fixed returns over the tenure of the investment. The profits are payable month to month, quarterly or yearly, according to the bank rules.

Depending on the bank, FDs offer cumulative and non cumulative options of investment. When it comes to the non-cumulative option, as per underwriting the interest will be paid and on the other hand, the interest will be reinvested and will be paid at the maturity within cumulative option. Features are as following:-



- Investing Bank Fixed deposits give financial stability and safe instrument tool, which let's investor earn high return on a surplus fund.
- The renewal of bank Fixed Deposits is easy and certain banks provide overdraft facility against Fixed Deposits.
- The market fluctuation does not affect the Fixed deposit and the returns are Fixed as well.

#### **5) National Pension Scheme (NPS):**

Being one of the best investment option, which is government-backed that offers pension solutions. The funds invests in bonds, government securities, equity and other investment alternatives as per the investors preference. It offers two options :- Auto and Active. Under the auto option, the funds are invested automatically in different assets, whereas the active option enables the investor to invest in assets as per their choice.

The lock in period depends on the investors age, as the scheme only matures when the investors turn 60. As per this scheme, the accumulated interest is tax-free. And when one chooses for the lump sum payment upon maturity, 40 of the maturity proceeds are tax exempt. If one options to receive the pension post maturity, the amount is taxable as regular income.

Features are as following:-

- When investing in an NPS it provides the flexibility of choice between auto and active.
- NPS also permits the investors for partial withdrawal of funds.
- NPS let's you remain independent even after you retire.

#### **6) Real Estate Investment:**

One of the fastest-growing sectors in India is real estate, which holds great prospects in different sectors such as retail, housing, manufacturing, commercial, hospitality and much more. Buying a flat or plot is the best decision amongst the investment options available in India. The risk is very low because the rate of the property increases within 6 months. Real estate investment works as an assets, which is considered as one of the best investment plans with high returns over a long term period. Features are as following:-

- Investment in real estate has a high tangible asset value.

- Investing in real estate also let you have a portfolio, which lowers your volatility and provide high returns.
- Wait until the right time, and accordingly sell the property and the investments get liquidated.

#### **7) RBI Bonds:**

The RBI taxable bonds have tenure of 7 years and offer an interest rate of 7.75 per annum. These bonds are furnished in Demat mode only and are accredited to the bond ledger account of the investors. The bonds are issued for Rs. 1000, and as proof of the investment, the investors get a certificate of holding.

With the non-cumulative option, the interest can be accessed as regular income, on the contrary, the reinvested interest is offered within the cumulative option. This makes these bonds one of the best investment options in India. Features are as following:-

- Any individual can invest in this bond with any maximum limit on the amount of investment.
- Premature withdrawal for senior citizens applies to fulfill certain criteria.
- An investors can receive interest payment in any cumulative or non cumulative form.

#### **8) Gold ETF:**

Gold exchange traded funds are tools, which are a combination of both gold investment and stock. The Gold ETF can be easily bought and likewise can be sold with any company stock. The Gold ETFs are instruments that are passive on the premise of the price of the gold making it transparent when it comes to pricing.

When the market linked tools in terms of risks are volatile, often higher returns are offered. Therefore, before you lock down a financial instrument, it is advisable to conduct research and get complete correct information in regards to the product and the position of it in the market. Features are as following:-

- Investment in gold ETF provides high liquidity, which can be easily traded in the stock exchange.
- The advantage to decide the quantum you intend to sell and buy.
- It can be used as security for secured loans and make the transaction instant.



### 3.8 Conclusion:

Equity shares are mostly important for company as well as shareholders. For company, equity shares are income for company and for shareholder, it benefit in two ways i.e., yearly dividend and appreciation in the value of their investment. Equity shares offer so many features to their shareholders such as right of vote, right to control the company affairs, high dividend at the time of high profit and so forth. Along with several drawback such as shareholder get last preference at the time of paying dividend, market value fluctuation, etc. For short period of time, fixed maturity plans, debt mutual funds, post office term deposits, mutual funds, recurring deposits, and fixed deposit. And for long period of time liquid funds, saving account, post office time deposit, stock market. The main idea behind any investment is high risk so high return.

### 3.9 Reference

#### ❖ Report and books:

- 1) Report on (Issue of equity shares) from prof.ajaya assistant professor from GFGC Mudipu.
- 2) Book of stock to riches by parag parikh.
- 3) Books of bulls, bears, and other beasts by Santos Nair.

#### ❖ Websites:

- 1) [www.policybazaar.com](http://www.policybazaar.com)



**CHAPTER 4**  
**DATA ANALYSIS AND INTERPRETATION**

**4.1 INTRODUCTION.**

**4.2 DATA ANALYSIS AND INTERPRETATION.**

**4.3 CONCLUSION.**

## CHAPTER 4

### DATA ANALYSIS AND INTERPRETATION

#### 4.1 INTRODUCTION:

The Researcher also prepared a questionnaire to total 50 investors. In this chapter firstly data analysis and interpretation of data collected from investors. The researcher has been selected 50 investors who invest in various investment opportunities for present study. This data graphically also presented and after the table and graphical presentation the interpretation of each table and graph is given below. The financial planning of the investors tabulated and graphically presented and later on interpretation of table and graph is given. Then lastly conclusion of this Chapter is given.

#### 4.2 DATA ANALYSIS AND INTERPRETATION

##### 4.3 4.2.1 Demographic profile

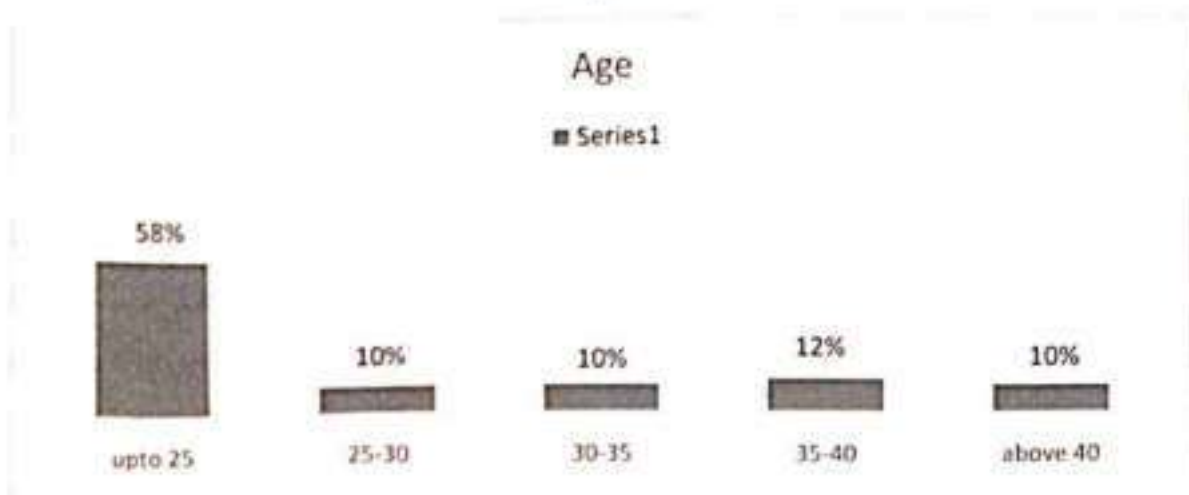
1.1 Classification of respondents according to age:

Age

Table 1.1

Sr no	Particular	No of Respondents	Percentage
1	Upto 25	29	58%
2	25-30	5	10%
3	30-35	5	10%
4	35-40	6	12%
5	Above 40	5	10%
	Total	50	100%

Graph 1.1



The above table and graph shows the age of the respondents. Out of total 50 respondents. This figures shows that 58% respondents are Upto 25 years old and 10% respondents are between 25 to 30 year old. 10% respondents are between 30 to 35 year old and 12% respondents are between 35 to 40 years old. 10% respondents are Above 40 years. So from above table it was observed that majority (58%) respondents are Upto 25 years old. Because they are more concerned about their investment and future saving.

### 1.2. Classification of respondents according to gender:

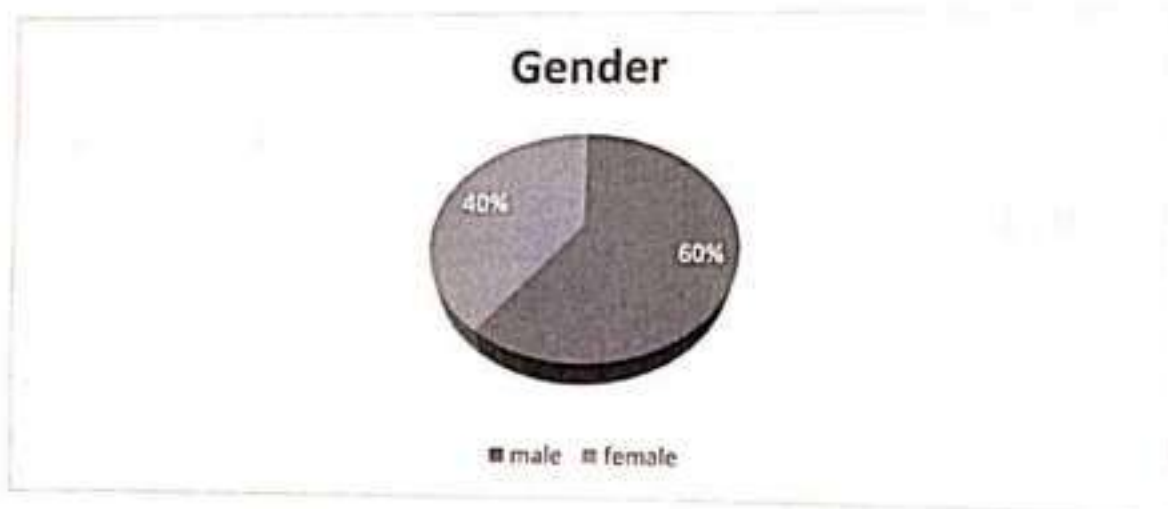
#### Gender of the Respondents:

Table 1.2

Sr no	Gender	No of Respondents	Percentage
1	Male	30	60%
2	Female	20	40%
	Total	50	100%

Gender

Graph 1.2



The above table and graph shows the classification of respondents according to gender. Out of Total 50 respondents. This figure indicates that 60% respondents are Male and 40% respondents are female. So it was observed that majority of the respondents are Male. Because



they earned maximum profit in their business and job. And provision for family members dependent.

1.3 Classification of Respondents according to educational qualification

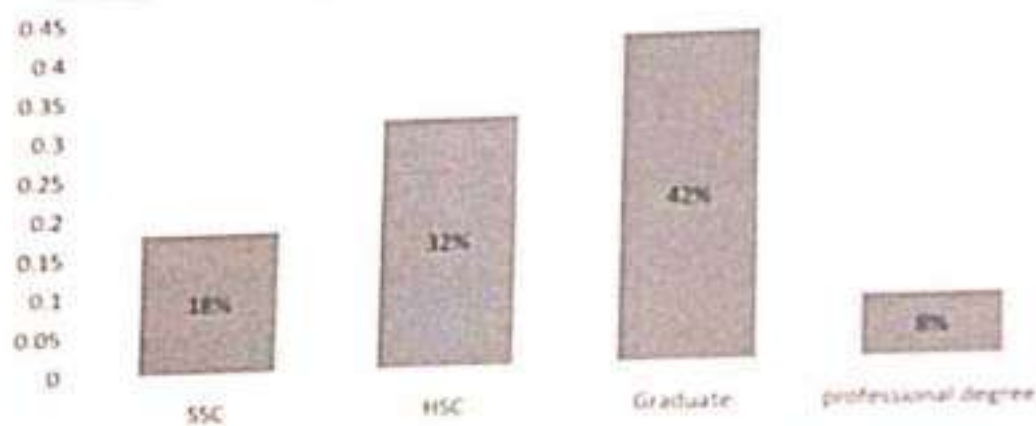
Education qualification of the respondents

Table 1.3

Sr no	Education	No of Respondents	Percentage
1	SSC	9	18%
2	HSC	16	32%
3	Graduate	21	42%
4	Professional degree	4	8%
	Total	50	100%

Education qualification of the respondents

Graph 1.3



The above table and graph shows the educational qualification of the respondents. Out of total 50 respondents, the above figures show that 42% respondents are graduate, 32% respondents are HSC, 18% respondents are SSC, 8% respondents are professional degree holder. From the above analysis it was observed that majority of the respondents are graduate and HSC. Because they earned maximum profit in their business and job. And investments options secure their money.

## 1.4 Classification of respondents according to occupation:

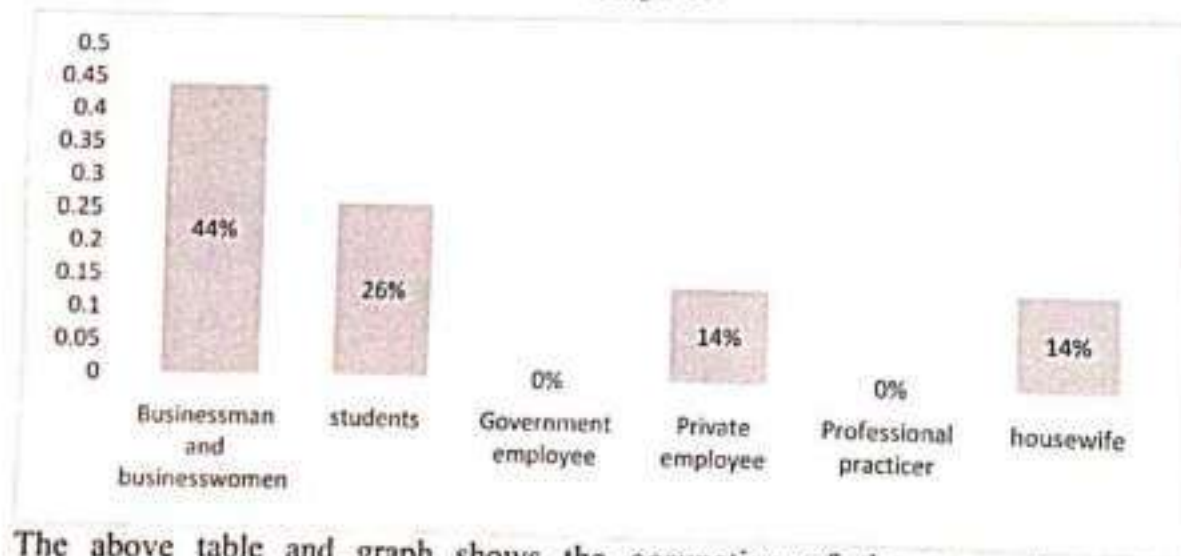
**Occupation of the respondents:**

Table 1.4

Sr no	Particular	No of Respondents	Percentage
1	Businessmen and businesswomen	22	44%
2	Students	13	26%
3	Government employee	0	0%
4	Private employee	8	14%
5	Professional practicer	0	0%
6	Housewife	7	14%
	Total	50	100%

**Occupation of the respondents:**

Graph 1.4



The above table and graph shows the occupation of the respondents. Out of Total respondents, it shows that 44% respondents are businessman or businesswomen. 26% respondents are students. 14% respondents are housewife and Private employee. So from above it is observed that majority (44%) respondents are businessman or businesswomen. Because businessman or businesswomen have good and continuous source of income by investment they diversify their income and build up their finance.

## 1.5 Classification of respondents according to their annual income:

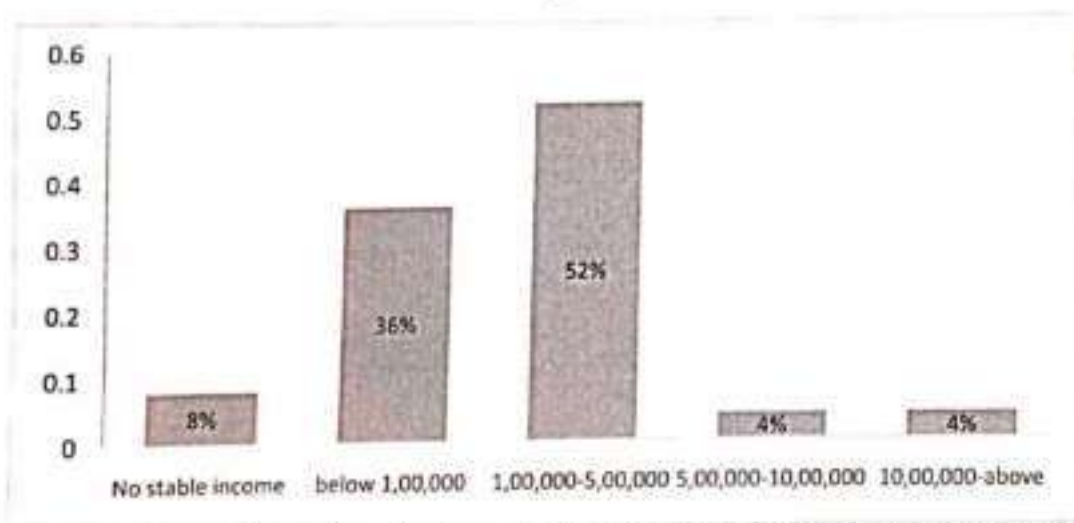
**Annual income of the respondents:**

Table 1.5

Sr no.	Annual income	No of Respondents	Percentage
1	No stable income	4	8%
2	Below 1,00,000	16	36%
3	1,00,000 to 5,00,000	26	52%
4	5,00,000 to 10,00,000	2	4%
5	10,00,000 and Above	2	4%
	Total	50	100%

**Annual income of the respondents:**

Graph 1.5



The above table and graph shows the Annual income of the respondents. Out of total 50 respondents, it shows that 52% respondents Annual income is between 1,00,000-5,00,000. 36% respondents Annual income is below 1,00,000. 8% respondents Annual income is not stable. 4% respondents Annual income is 5,00,000 to 10,00,000. 4% respondents Annual income is between 10,00,000 and Above. So from the above it was observed that majority of the respondents Annual income is between 1,00,000-5,00,000.



Because of limited income, they have been investing for last few years to increase their money.

#### 4.2.2 Investment options:

#### 2. Classification of respondents according to their investment preference:

#### 2.1 Mean of investment options:

Table no 2.1

Sr no	Particular	5	4	3	2	1	Total	Mean
1	Equity shares or stock market.	17	15	15	1	2	50	3.90
2	Insurance plan	12	17	16	3	2	50	2.05
3	Public Provident fund	10	10	20	8	2	50	3.66
4	Mutual fund	13	14	17	5	1	50	3.62
5	Bank Fixed deposit (FD)	9	21	13	3	4	50	3.58
6	National pension scheme	10	12	20	6	2	50	3.45
7	Senior citizen saving scheme	9	10	24	6	1	50	3.43
8	Real estate investment	15	12	17	5	1	50	3.72
9	RBI bonds	13	8	23	4	2	50	3.54
10	Post office monthly income scheme	13	12	18	5	2	50	3.54

(5=Extremely satisfied, 4=somewhat satisfied, 3=neutral, 2=somewhat dissatisfied, 1=Extremely dissatisfied)

From the data, it can be observed that most preferable investment option is equity shares which is more popular because of its high returns, high liquidity and other benefits. Other most preferable investment options are real estate investment, public Provident fund, Mutual funds and bank Fixed deposit. The less preferred investment options are post monthly income scheme, RBI Bonds, national pension schemes and senior citizen saving scheme. And the least preferred asset option is insurance plan. From the above analysis it was observed that majority of respondents prefer those assets or investment options which offer high returns and additional benefits as per the mean.

Classification of respondents according to responses

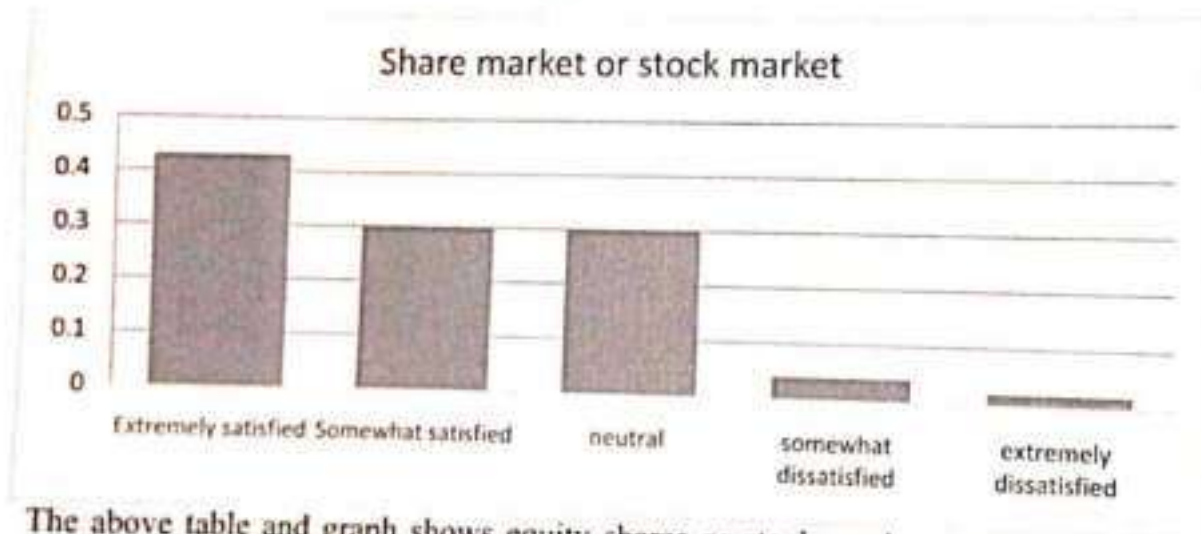
2.1. Equity shares or stock market:

Table 2.2

Sr no.	Particular	No of Respondents	Percentage
1	Extremely satisfied	17	43%
2	Somewhat satisfied	15	30%
3	Neutral	15	30%
4	Somewhat dissatisfied	2	4%
5	Extremely dissatisfied	1	2%
	Total	50	100%

Equity shares or stock market

Graph 2.2



The above table and graph shows equity shares or stock market responses. Out of total 50 respondents, this figures shows that 43% people are extremely satisfied by equity shares or stock market. 30% people are Somewhat satisfied, 30% people are neutral, 4% people are extremely dissatisfied, 1% people are Somewhat dissatisfied by equity shares or stock market. Majority of people are extremely satisfied, Because equity shares give high return on investment.

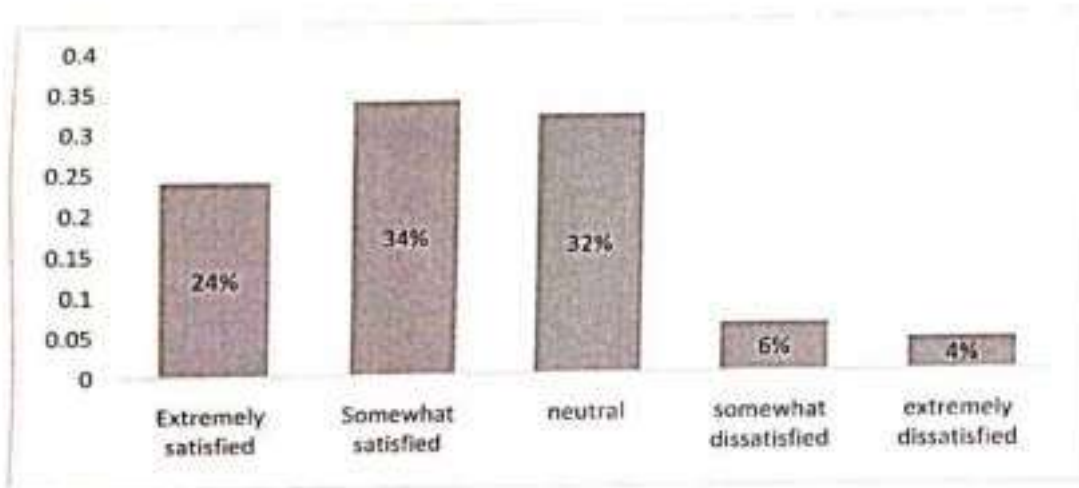
## 2.3 Insurance plan:

Table 2.3

Sr no.	Particular	No of Respondents	Percentage
1	Extremely satisfied	12	24%
2	Somewhat satisfied	17	34%
3	Neutral	16	32%
4	Somewhat dissatisfied	3	6%
5	Extremely dissatisfied	2	4%
	Total	50	100%

Insurance plan

Graph 2.3



The above table and graph shows insurance plan responses. Out of total 50 respondents, this figure shows that 34% people are Somewhat satisfied by insurance plan, 32% people are neutral, 24% people are extremely satisfied by insurance plan, 6% people are Somewhat dissatisfied, 4% people are extremely dissatisfied by insurance plan. From the above analysis it was observed that majority of respondents are Somewhat satisfied, because insurance plan give medium return on investment without much risk compared to other options.



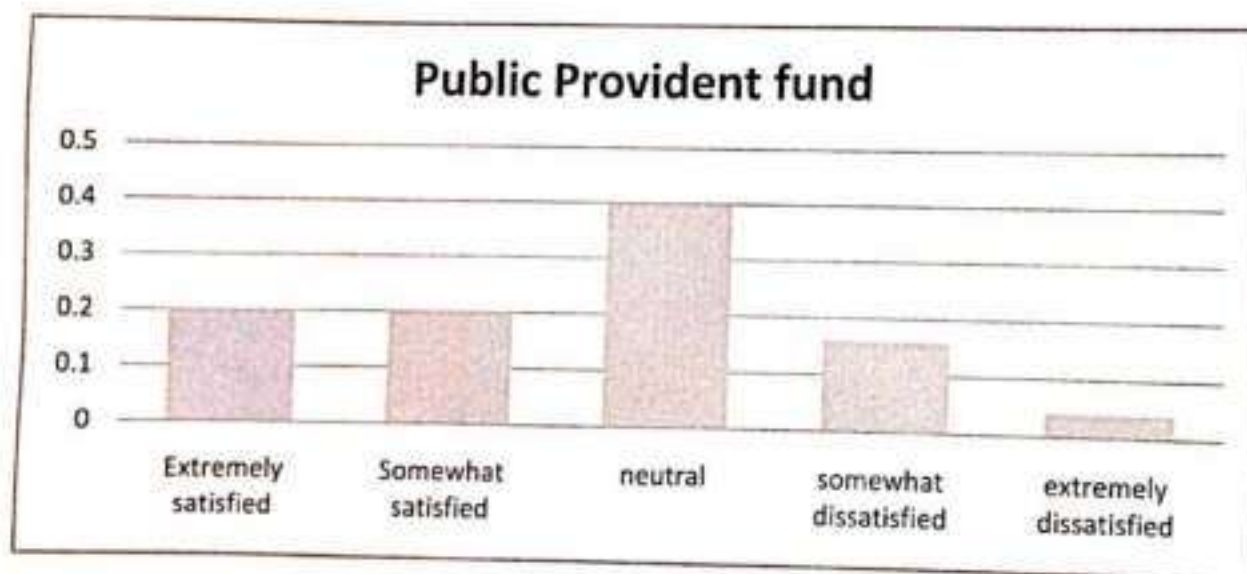
## 2.4 Public Provident Fund:

Table 2.4

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	10	20%
2	Somewhat satisfied	10	20%
3	Neutral	20	40%
4	Somewhat dissatisfied	8	16%
5	Extremely dissatisfied	2	4%
	Total	50	100%

Public Provident fund

Graph 2.4



The above table and graphs shows the Public Provident Fund responses. Out of total 50 respondents, this figures shows that 40% people are neutral for public Provident Fund. 20% people are extremely satisfied and along with it 20% people are Somewhat satisfied by public Provident Fund. 16% people are Somewhat dissatisfied. 4% people are extremely dissatisfied. From the above analysis it was observed that 40% people are neutral, because the public Provident Fund have long lock in period.

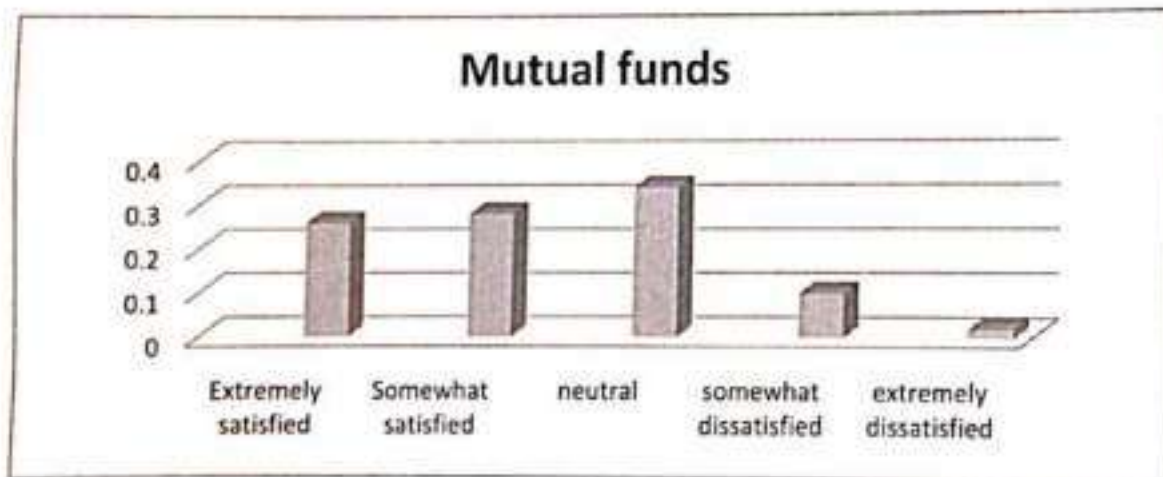
## 2.5 .Mutual fund:

Table 2.5

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	13	26%
2	Somewhat satisfied	14	28%
3	Neutral	17	34%
4	Somewhat dissatisfied	5	10%
5	Extremely dissatisfied	1	2%
	Total	50	100%

Mutual fund:

Graph 2.5



The above table and graph shows the mutual fund responses. Out of total 50 respondents, This figures shows that, 37% people are neutral for mutual fund. 28% people are Somewhat satisfied. 26% people are extremely satisfied by mutual funds. 10% people are somewhat dissatisfied by mutual fund, 2% people are extremely dissatisfied by mutual fund. From above analysis it was observed that the majority of the respondents are neutral for mutual funds. Because mutual fund are subject to market risk.

## 2.6. Bank Fixed Deposits (FD):

Table 2.6

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	9	18%
2	Somewhat satisfied	21	42%
3	Neutral	13	26%
4	Somewhat dissatisfied	3	6%
5	Extremely dissatisfied	4	8%
	Total	50	100%

Bank fixed deposit

Graph 2.6



The above table and graph shows the Bank Fixed deposit responses. Out of total 50 respondents. This figures shows that, 42% people are Somewhat satisfied by Bank deposit. 26% people are neutral and 18% people are extremely satisfied. 8% people are extremely dissatisfied and 6% people are Somewhat dissatisfied by Bank fixed deposits. So from above analysis it was observed that, majority of respondents are Somewhat satisfied by Bank deposits, because Bank fixed deposits give financial stability along with high return and also protect from market fluctuation.



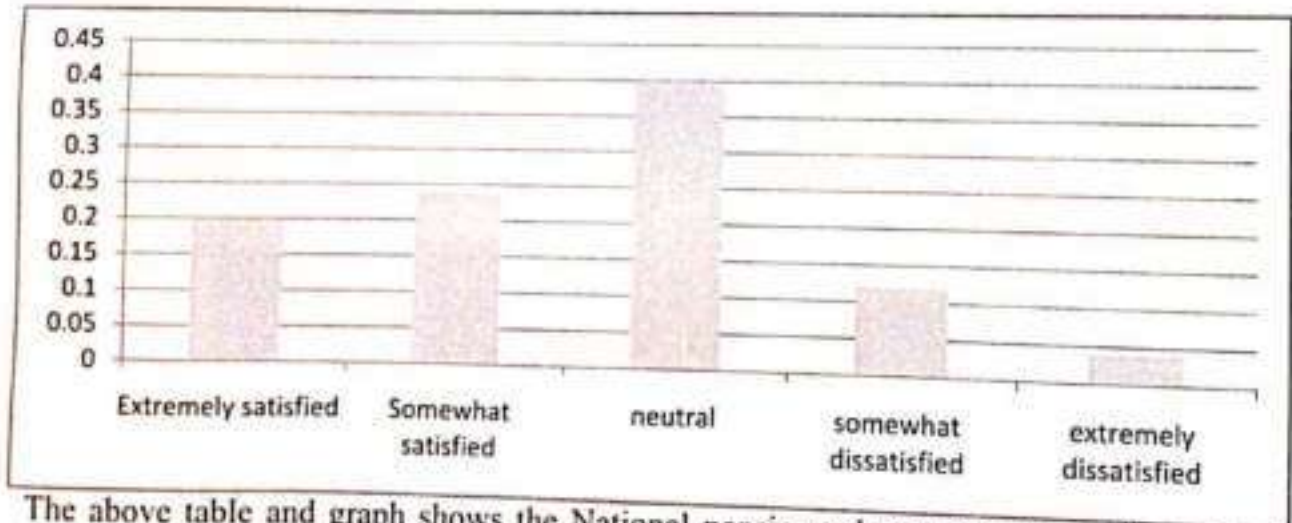
2.7. National pension scheme:

Table 2.7

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	10	20%
2	Somewhat satisfied	12	24%
3	Neutral	20	40%
4	Somewhat dissatisfied	6	12%
5	Extremely dissatisfied	2	4%
	Total	50	100%

National Pension Scheme

Graph 2.7



The above table and graph shows the National pension scheme responses. Out of Total 50 respondents, This figure shows that 40% of people are neutral for national pension scheme and 24% people are Somewhat satisfied. 20% people are extremely satisfied by National pension scheme and 12% people are Somewhat dissatisfied. 4% people are extremely dissatisfied. So from above analysis it was observed that majority of respondents are neutral for National pension scheme, because National pension scheme has long lock in period and there is less awareness among people about its features.

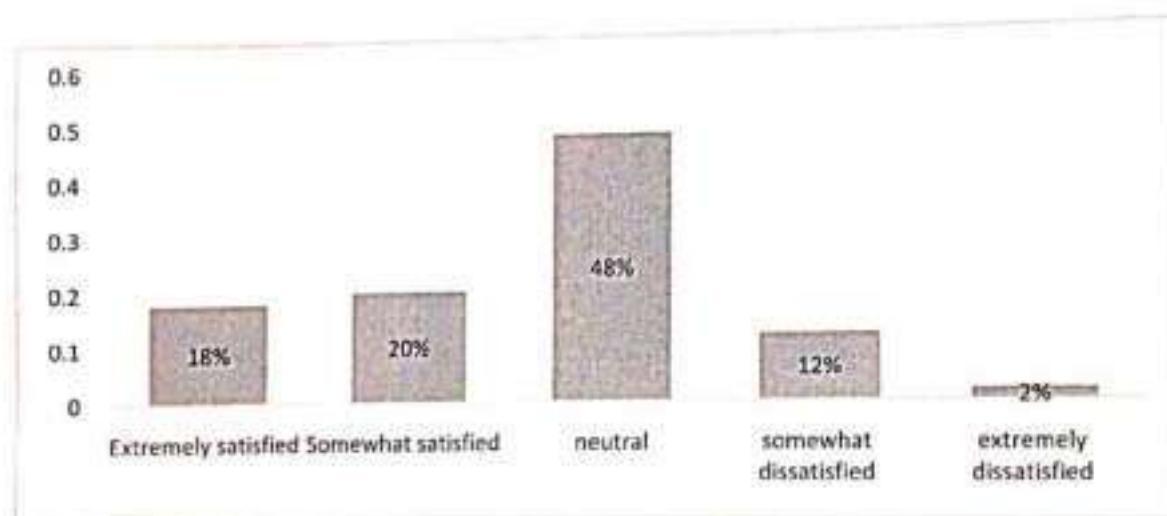
## 2.8. Senior citizen saving scheme

Table 2.8

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	9	18%
2	Somewhat satisfied	10	20%
3	Neutral	24	48%
4	Somewhat dissatisfied	6	12%
5	Extremely dissatisfied	1	2%
	Total	50	100%

Senior citizen saving scheme

Graph 2.8



The above table and graph shows the senior citizen saving scheme responses. Out of total 50 respondents, his figure shows that, 48% people are Neutral by senior citizens saving scheme and 20% people are Somewhat satisfied. 18% people are extremely satisfied and 12% people are Somewhat dissatisfied by Senior citizen saving scheme. 2% people are extremely dissatisfied. So from above analysis it was observed that majority of respondents are neutral for senior citizen saving scheme, because the income from scheme is subject to TDS.

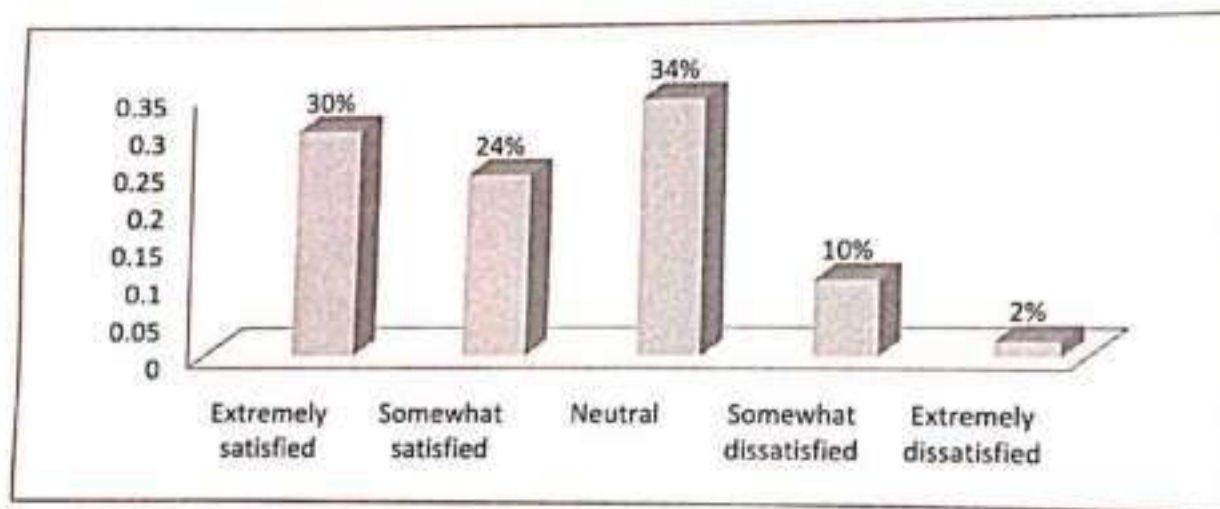
2.9. Real estate investment:

Table 2.9

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	15	30%
2	Somewhat satisfied	12	24%
3	Neutral	17	34%
4	Somewhat dissatisfied	5	10%
5	Extremely dissatisfied	1	2%
	Total	50	100%

Real estate investment

Graph 2.9



The above table and graph shows the real estate investment responses. Out of total 50 respondents, this figure shows that 34% people are neutral and 30% people are extremely satisfied by real estate investment. 24 people are Somewhat satisfied and 10% people are Somewhat dissatisfied by Real estate investment. 5% people are extremely dissatisfied. So from above it was observed that majority of respondents are neutral, because return on investment is high but return on investment get affected by market conditions.



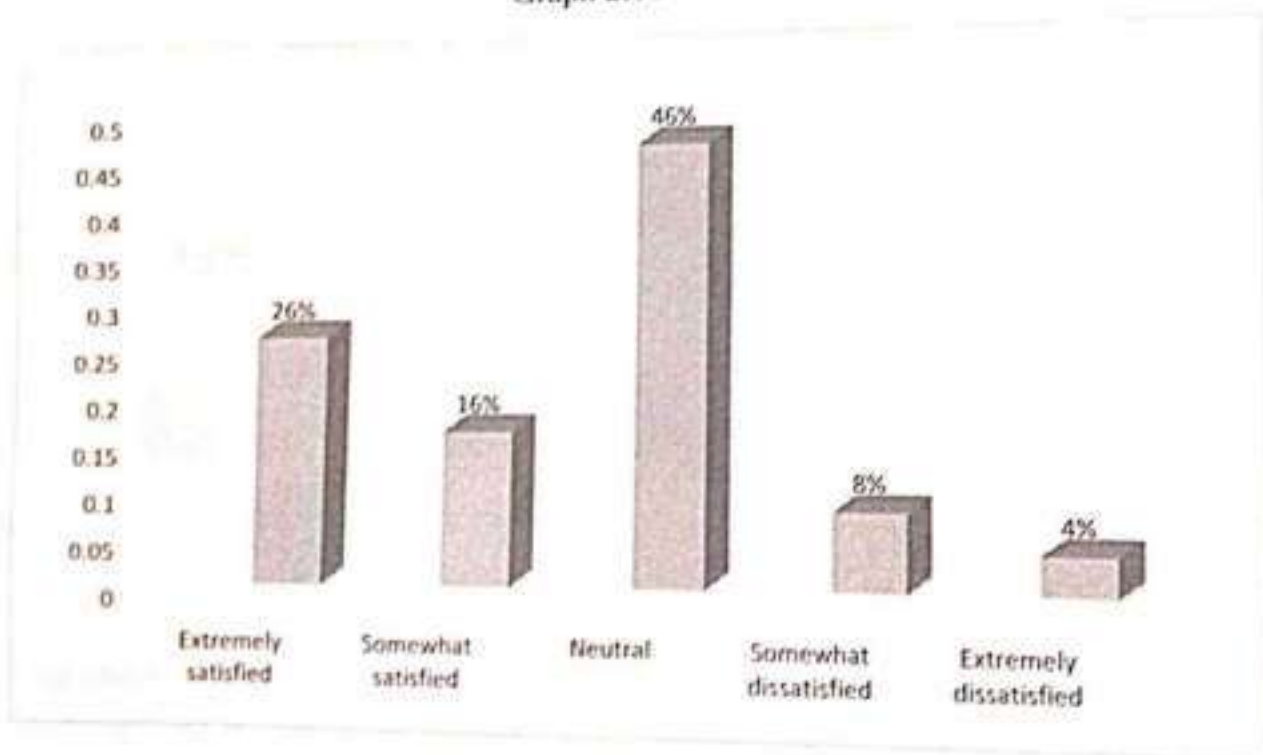
2.10. RBI Bonds:

Table 2.10

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	13	26%
2	Somewhat satisfied	8	16%
3	Neutral	23	46%
4	Somewhat dissatisfied	4	8%
5	Extremely dissatisfied	2	4%
	Total	50	100%

RBI Bonds

Graph 2.10



The above table and graph shows the RBI Bonds responses. Out of total 50 respondents, his figures shows that, 46% people are neutral and 26% people are extremely satisfied by RBI Bonds. 16% people are Somewhat satisfied and 8% people are Somewhat dissatisfied by RBI Bonds. 4% people are extremely dissatisfied by RBI Bonds. So from above analysis it was

observed that majority of respondents are neutral, because RBI Bonds have higher risk and restrictions on premature withdrawal.

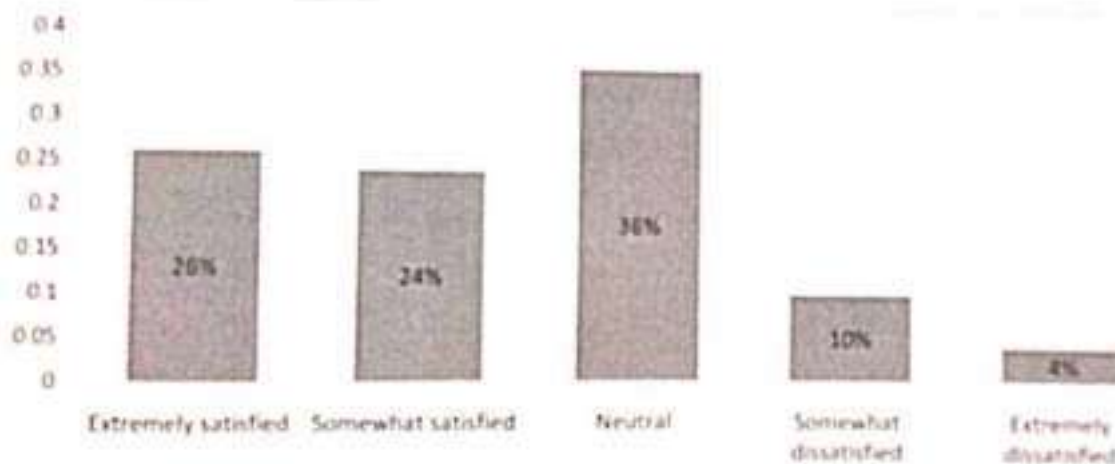
### 2.11 Post office monthly income schemes:

Table 2.11

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	13	26%
2	Somewhat satisfied	12	24%
3	Neutral	18	36%
4	Somewhat dissatisfied	5	10%
5	Extremely dissatisfied	2	4%
	Total	50	100%

Post office monthly income scheme

Graph 2.11



The above table and graph shows the Post office monthly income scheme responses. Out of total 50 respondents, This figures shows that 36% people are neutral and 26% people are extremely satisfied by Post office monthly income scheme. 24% people are Somewhat satisfied and 10% people are Somewhat dissatisfied by Post office monthly income scheme. 4% people are extremely dissatisfied. So from the above analysis it was observed that majority of

respondents are neutral, because the invested amount is not tax deductible but is not subject to market risk.

4.2.3 Table showing amount invested by respondents in investment options per month:

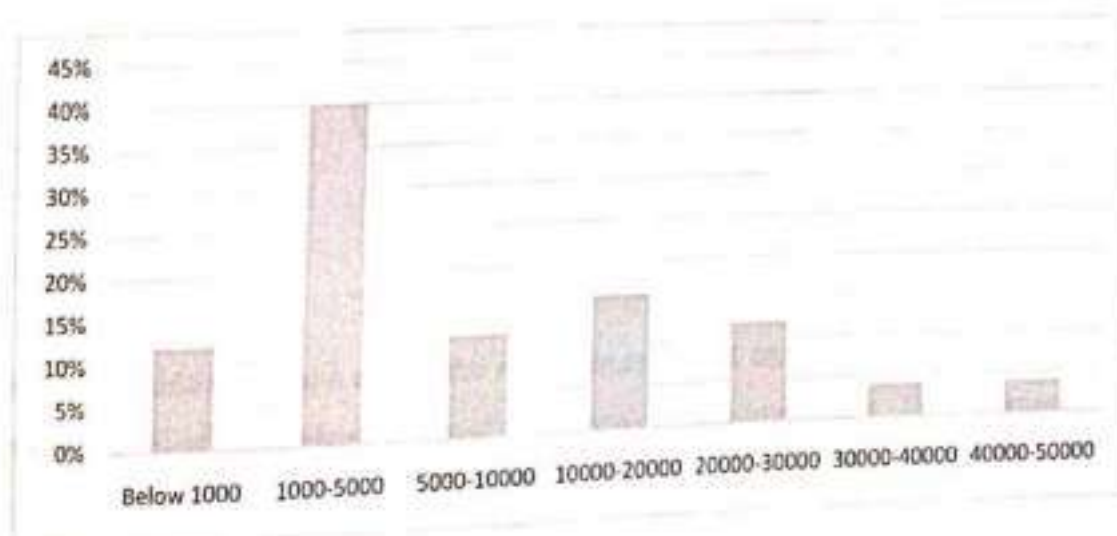
4.2.3 Amount invested by respondents in investment options:

Table 2.12

Sr no	Particular	No of Respondents	Percentage
1	Below 1000	6	12%
2	1000-5000	20	40%
3	5000-10000	6	12%
4	10000-20000	8	16%
5	20000-30000	6	12%
6	30000-40000	2	4%
7	40000-50000	2	4%
	Total	50	100%

Amount invested by respondents in investment options:

Table 2.12



The above table and graph shows the amount investment by the respondents in investment options per month. Out of total 50 Respondent, this figures shows that 40% respondents invest between 1000-5000, 16% respondents invest 10000-20000 and 12% respondents invest between



0-1000 and between 20000-30000 and between 5000-10000. 4% respondents invest between 30000 to 50000 in investment options. So from the above analysis it was observed that majority of respondents invest between 1000 to 5000 in investment options. Because they invest funds in part of salary and profit.

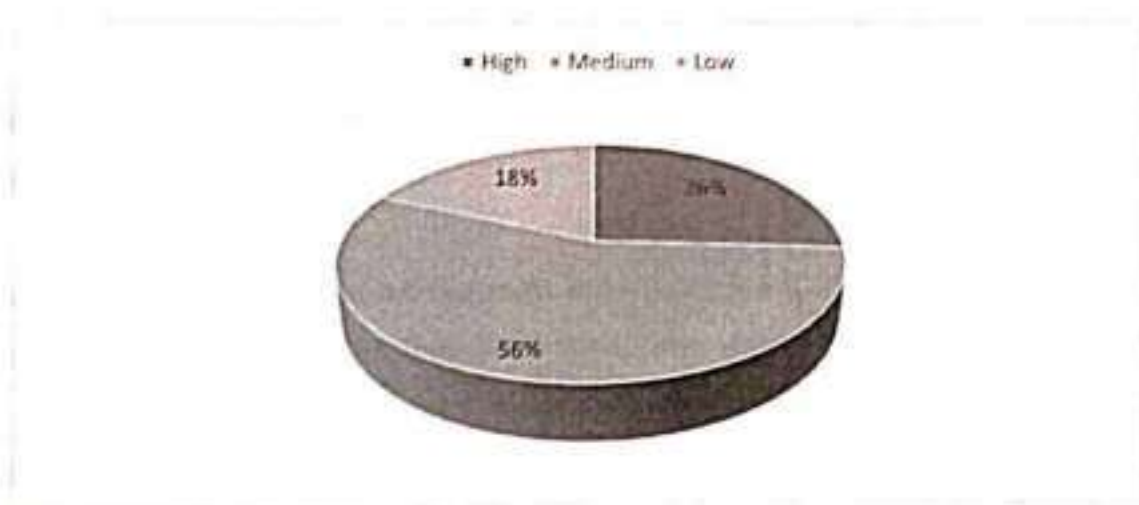
#### 4.2.4 The return investors get on their investment:

Table 2.13

Sr no	Particular	No of Respondents	Percentage
1	High	13	26%
2	Medium	28	56%
3	Low	9	18%
	Total	50	100%

The return investors get on their investment

Graph 2.13



The above table and graph shows the return investors get on their investment. Out of total 50 respondents, 56% of respondents get medium return on their investment, 26% of respondents get high return on investment and 18% of respondents earn low return on their investment. So from the above analysis it was observed that majority of respondents prefer safe investment options which give returns on stable rate.

## 4.2.4 Factors influencing investment decisions of investors:

## 3. Table showing the mean of factors influencing investment decisions

Table no 3.1

Sr no	Particular	5	4	3	2	1	Total	Mean
1	Liquidity	24	15	10	1	0	50	4.25
2	Return on investment	17	24	8	1	0	50	4.15
3	Safety on Investment	23	10	16	1	0	50	4.11
4	Risk In investment	17	16	10	6	1	50	3.86
5	Tax saving	16	14	12	2	6	50	3.66
6	Inflation	10	14	16	8	2	50	3.50
7	Government policy	15	14	14	3	4	50	3.68

(5=Extremely satisfied, 4=somewhat satisfied, 3=neutral, 2=somewhat dissatisfied, 1=Extremely dissatisfied)

From the above table, it shows that most influencing factor is liquidity because majority of investors prefer easy liquidity for their betterment. Other most influencing factors are return and safety on their investment. And least influencing factors are risk, tax saving, inflation and government policy. From the above analysis it was observed that majority of investors prefer liquidity, return and safety on their investment because investors expect major flexibility in their investment as per the mean.

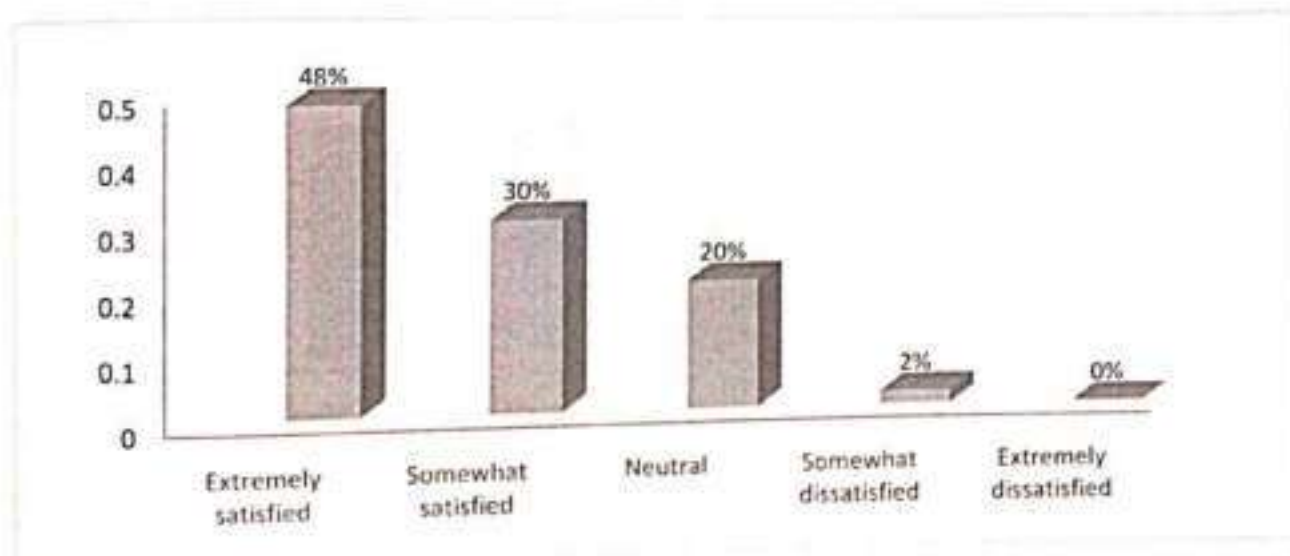
## 4.2.4. Factors influencing investment decisions of investors:-

## 3.2. Liquidity in investment options:

Table 3.2

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	24	48%
2	Somewhat satisfied	15	30%
3	Neutral	10	20%
4	Somewhat dissatisfied	1	2%
5	Extremely dissatisfied	0	0%
	Total	50	100%

Graph 3.2



The above table and graph shows the liquidity in investment options. Out of total 50 respondents, this figure shows that 48% respondents are extremely satisfied by the liquidity of investment options and 30% respondents are Somewhat satisfied. 20% respondents are neutral and 2% are Somewhat dissatisfied by liquidity of investment options. So from above analysis it was observed that majority of respondents are extremely satisfied by liquidity of investment options, because most of the investment options offer high liquidity to its investors.



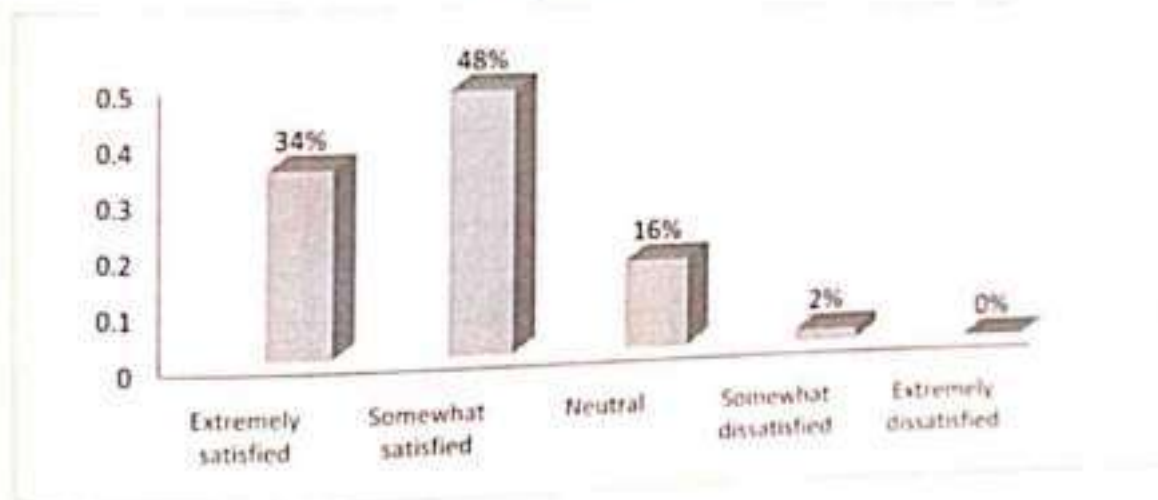
## 3.3 Return on investment:

Table 3.3

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	17	34%
2	Somewhat satisfied	24	48%
3	Neutral	8	16%
4	Somewhat dissatisfied	1	2%
5	Extremely dissatisfied	0	0%
	Total	50	100%

Return on investment:

Graph 3.3



The above table and graph shows the return on investment to investors. Out of total 50 respondents. This figures shows that 48% respondents are Somewhat satisfied by the return on investment and 34% respondents extremely satisfied. 16% respondents are neutral by return on investment and 2% respondents are Somewhat dissatisfied. So from the above analysis it was observed that majority of the respondents are Somewhat satisfied by the return on investment, because majority of investment plans offer high return with flexible features.

## 3.4 Safety in investment:

Table 3.4

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	23	46%
2	Somewhat satisfied	10	20%
3	Neutral	16	32%
4	Somewhat dissatisfied	1	2%
5	Extremely dissatisfied	0	0%
	Total	50	100%

Safety in investment:

Graph 3.4



The above table and graph shows the Safety in investment to investors. Out of total 50 respondents. This figures shows that 46% respondents are extremely satisfied by the Safety in investment and 32% respondents are neutral. 20% respondents are Somewhat satisfied and 2% respondents are Somewhat dissatisfied. So from above analysis it was observed that majority of respondents are extremely satisfied by the Safety in investment, because majority of investment plans offer maximum safety on the investment to the investors from several risk.

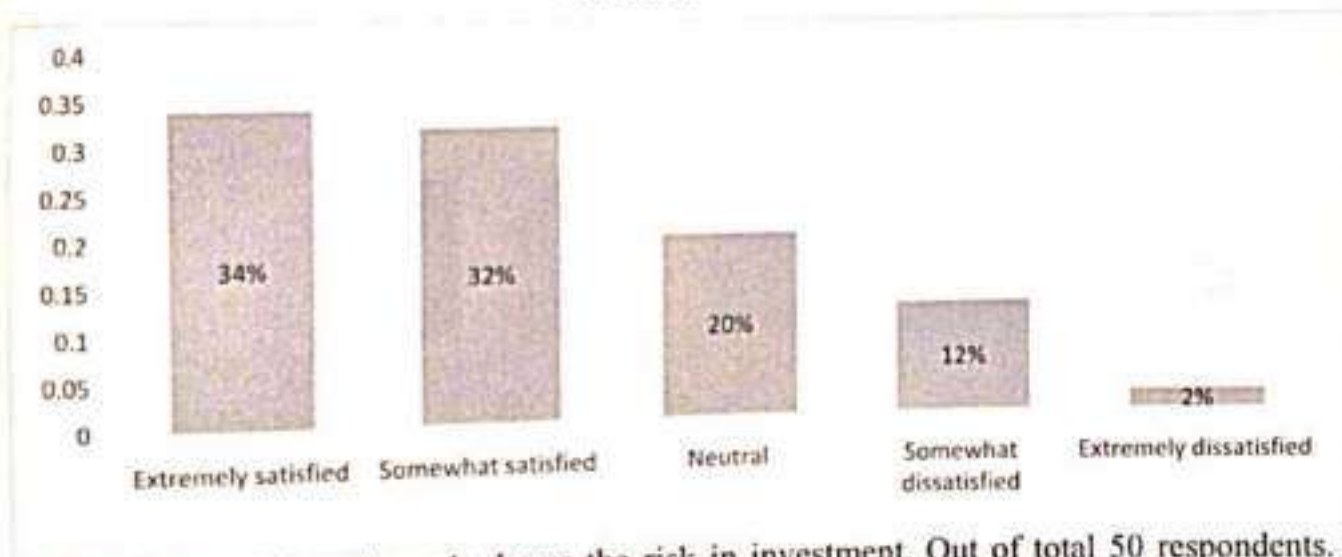
**3.5. Risk in investment:**

Table 3.5

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	17	34%
2	Somewhat satisfied	16	32%
3	Neutral	10	20%
4	Somewhat dissatisfied	6	12%
5	Extremely dissatisfied	1	2%
	Total	50	100%

Risk In investment:

Graph 3.5



The above table and graph shows the risk in investment. Out of total 50 respondents. This figures shows that 34% respondents are extremely satisfied and 32% respondents are Somewhat satisfied by the risk involved in investment. 20% respondents are neutral by risk in investment. 12% respondents are Somewhat dissatisfied and 2% respondents are extremely dissatisfied by risk in investment. So from above analysis it was observed that majority of respondents are extremely satisfied by the risk in investment, because most of the investment plans offer maximum protection from majority of risk to protect the interest of the investor.



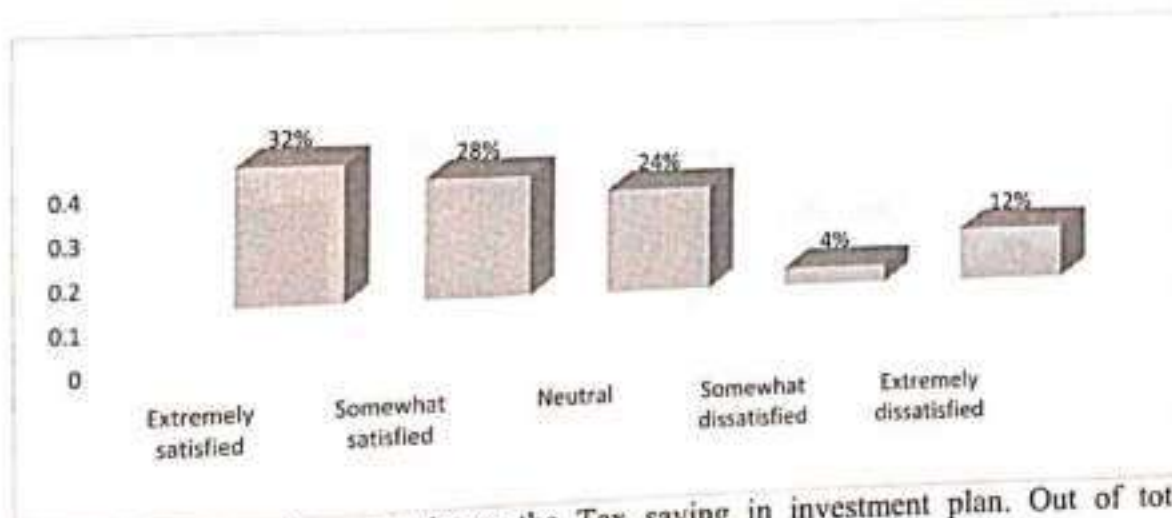
## 3.6. Tax saving:

Table 3.6

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	16	32%
2	Somewhat satisfied	14	28%
3	Neutral	12	24%
4	Somewhat dissatisfied	2	4%
5	Extremely dissatisfied	6	12%
	Total	50	100%

Tax saving in investment:

Graph 3.6



The above table and graph shows the Tax saving in investment plan. Out of total 50 respondents. This figures show that 32% respondents are extremely satisfied and 28% respondents are Somewhat satisfied by tax saving in investment plan. 24% respondents are neutral and 12% respondents are extremely dissatisfied by Tax saving in investment. 4% respondents are Somewhat dissatisfied. So from above analysis it was observed that majority of respondents are extremely satisfied by Tax saving in investment plan, because to safe guard the interest of investors the government give tax concession.

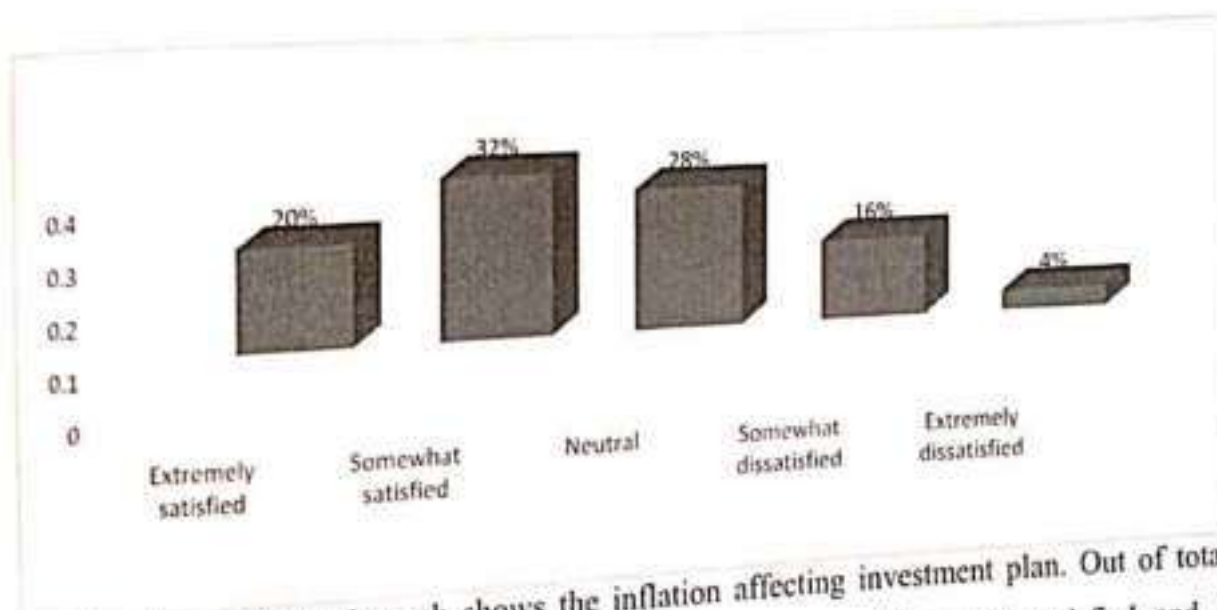
## 3.7. Inflation:

Table 3.7

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	10	20%
2	Somewhat satisfied	16	32%
3	Neutral	14	28%
4	Somewhat dissatisfied	8	16%
5	Extremely dissatisfied	2	4%
	Total	50	100%

Inflation

Graph 3.7



The above table and graph shows the inflation affecting investment plan. Out of total 50 respondents, This figures shows that 32% respondents are Somewhat satisfied and 28% respondents are neutral by inflation affecting investment plan. 20% respondents are extremely satisfied and 16% respondents are Somewhat dissatisfied by inflation. 4% respondents are extremely dissatisfied. So from above analysis it was observed that majority of respondents are Somewhat satisfied, Because majority of investment options do not get affected by inflation.

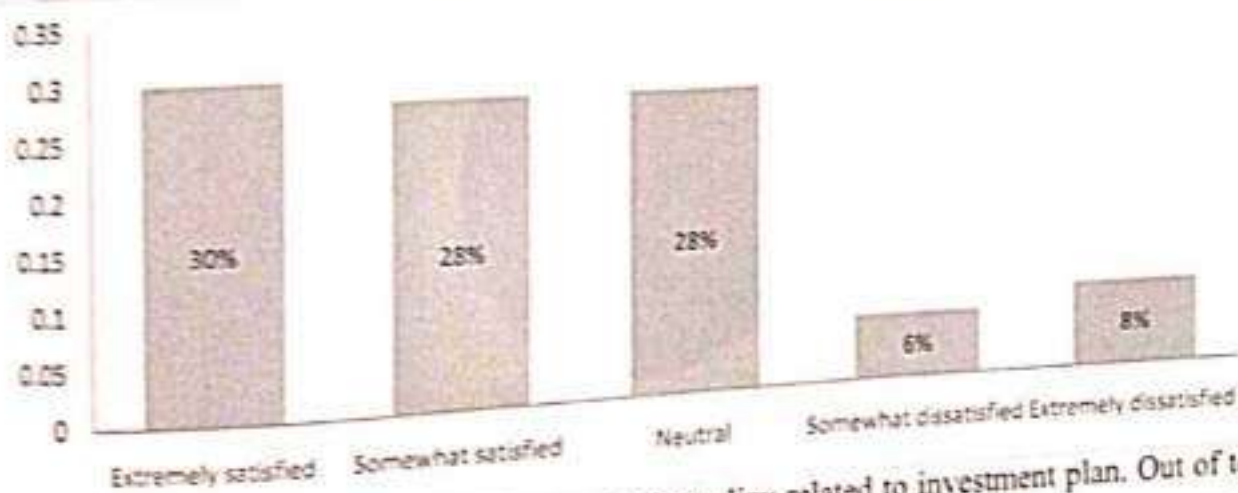
## 3.8 Government policy:

Table 3.8

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	15	30%
2	Somewhat satisfied	14	28%
3	Neutral	14	28%
4	Somewhat dissatisfied	3	6%
5	Extremely dissatisfied	4	8%
	Total	50	100%

Government policy:

Graph 3.8



The above table and graph shows government policy related to investment plan. Out of total 50 respondents, This figures shows that 30% respondents are extremely satisfied and 28% respondents are Somewhat satisfied and neutral by government policy related to investment plan. 8% respondents are extremely dissatisfied and 6% respondents are Somewhat dissatisfied by government policy related to investment plan. So from above analysis it was observed that majority of respondents are extremely satisfied by government policy related to investment plan. because government frame policies to promote and encourage investment among people.



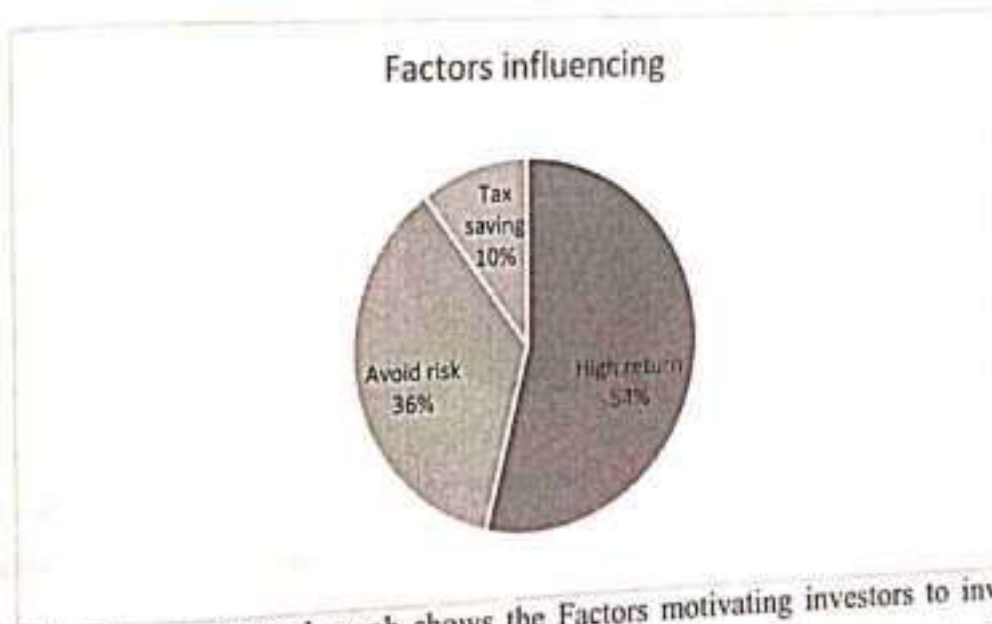
## 4.2.5. Factors motivating investors to investing their money or saving.

Table 3.9

Sr no	Particular	No of Respondents	Percentage
1	High return	27	54%
2	Avoid risk	18	36%
3	Tax saving	5	10%
	Total	50	100%

Factors motivating investors to investing their money or saving

Graph 3.9



The above table and graph shows the Factors motivating investors to investing their money or saving in various investment plans. Out of total 50 respondents, the figure shows that 54% respondents invest their money for earning high returns, 36% respondents invest their money to avoid risk and 10% respondents invest their money to save their tax. So from above analysis it was observed that majority of respondents prefer to invest their money or saving for earning high returns on their investment.

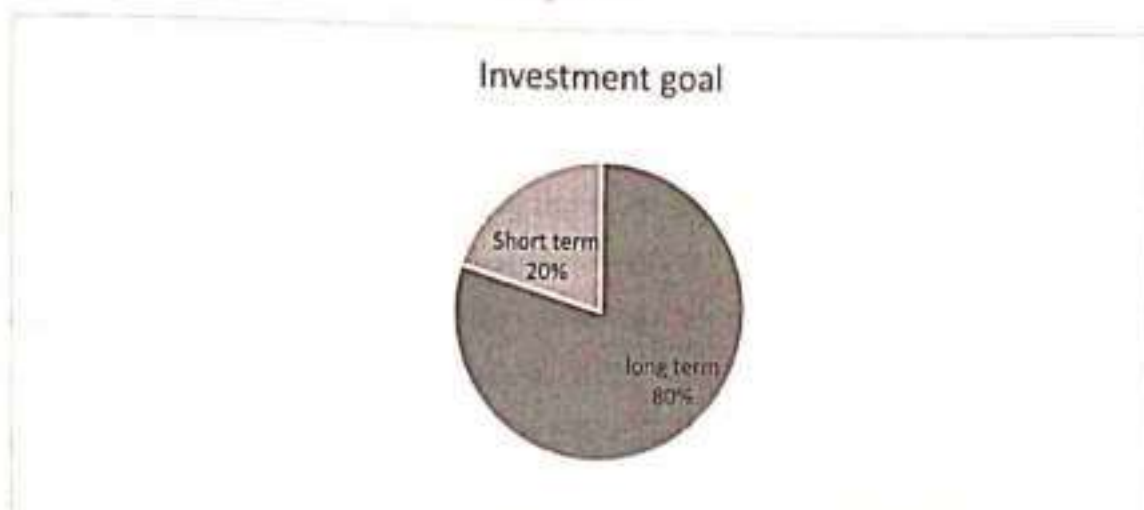
## 4.2.6 Investment objectives:

Table 3.10

Sr no	Particular	No of Respondents	Percentage
1	Income and capital preservation (long term)	40	80%
2	Growth and income (short term)	10	20%
	Total	50	100%

Investment object

Graph 3.10



The above table and graph shows the investment objectives of the investors. Out of total 50 respondents, This figure shows that 80% respondents have income and capital preservation means long term investment goal and 20% respondents have income and growth means short term investment objective. So from the above analysis it was observed that majority of respondents have long term investment objectives to earn high return for long period of time.

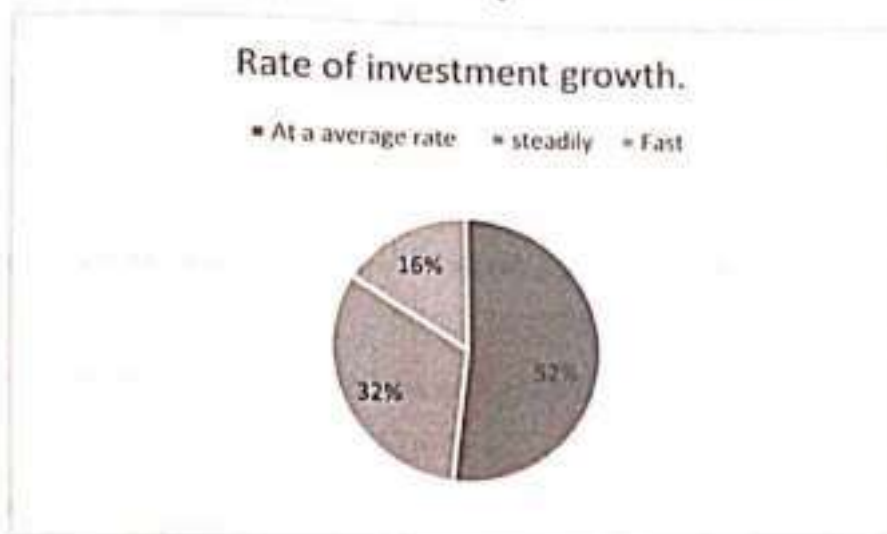
## 4.2.7. Rate at which investment growth is preferred:

Table 3.11

Sr no	Particular	No of Respondents	Percentage
1	At an average rate	26	52%
2	Steadily	16	32%
3	Fast	8	16%

	Total	50	100%
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Graph 3.11



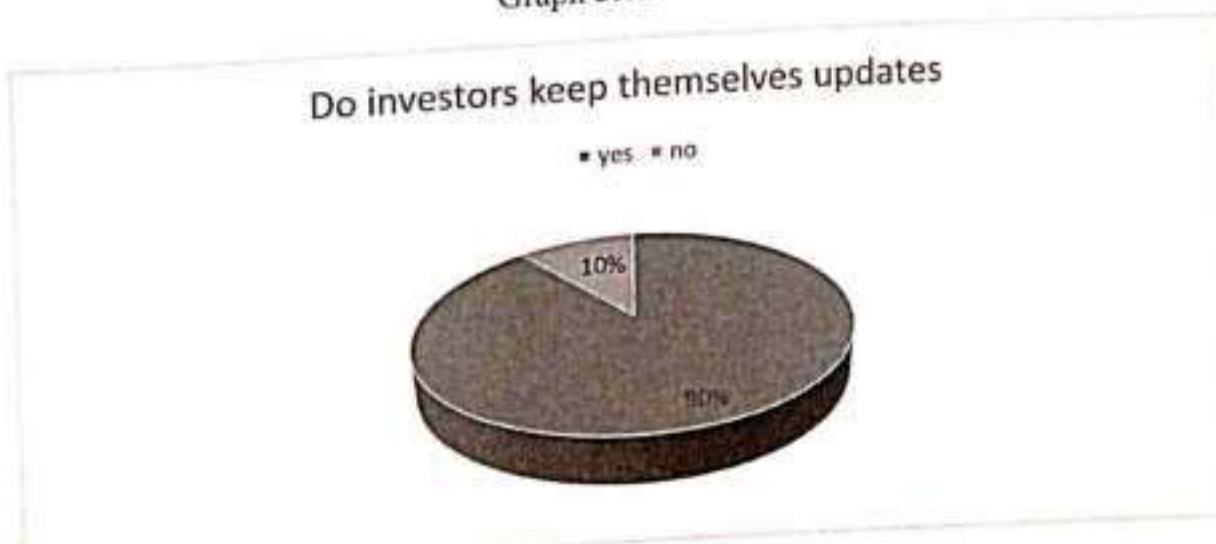
The above table and graph shows the rate at which investment growth is preferred by the investors. Out of total 50 respondents, the figure shows that 52% respondents prefer an average rate of growth of the investment and 32% respondents prefer steady rate of growth of their investment. 16% respondents prefer fast growth rate for investment. So from above analysis it was observed that majority of respondents prefer average growth rate for their investment, because it is believed that average growth rate give steady and long term return.

#### 4.2.8 Do investors keep themselves updates for better investment:

Table 3.12

Sr no	Particular	No of Respondents	Percentage
1	Yes	45	90%
2	No	5	10%
	Total	50	100%

Graph 3.12





The above table and graph shows do investors keep themselves updates for better investment. Out of total 50 respondents, This figure that 90% respondents keep themselves updates for better investment and 10% respondents do not keep the updates for better investment. So from above analysis it was observed that majority of respondents keep themselves updated with latest data for better investment, because through updates investors can get high return with better investment.

#### 4. Problems faced in investment opportunities by investors

Table showing the mean of problems faced by the investors:-

Table 4.1

Sr no	Particular	5	4	3	2	1	Total	Mean
1	High risk	19	20	9	1	1	50	4.11
2	Market fluctuation	11	27	10	2	0	50	3.96
3	Low return on investment	15	14	17	4	0	50	3.80
4	Barriers on investment	8	20	13	8	1	50	3.54
5	Lack of information	10	19	15	3	3	50	3.62

(5=Extremely satisfied, 4=somewhat satisfied, 3=neutral, 2=somewhat dissatisfied, 1=Extremely dissatisfied)

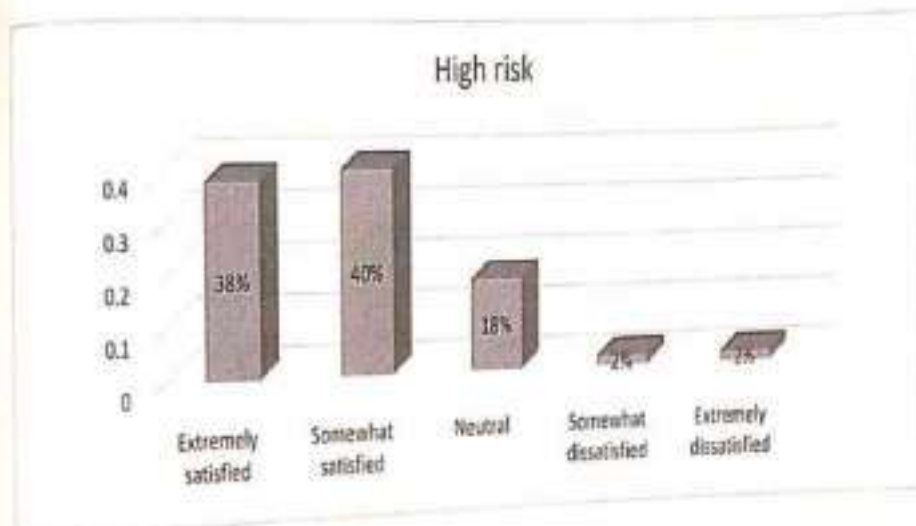
From the above data it shows that the major problem faced by investors is high risk. Other major problems are market fluctuation and low return on investment. The least problem faced by investors are barriers and lack of information. From the above analysis it was concluded that majority of investors face high risk, market fluctuation and low return which demonization the investors as per the mean.

## 4.1. High risk

Table 4.2

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	19	38%
2	Somewhat satisfied	20	40%
3	Neutral	9	18%
4	Somewhat dissatisfied	1	2%
5	Extremely dissatisfied	1	2%
	Total	50	100%

Graph 4.2



The above table and graph shows problem of high risk faced by investors. Out of total 50 respondents, This figures shows that 40% respondents are Somewhat satisfied by the high risk problem and 38% respondents are extremely satisfied. 18% respondents are neutral and 2% respondents are Somewhat and extremely dissatisfied by the high risk problem. So from above analysis it was observed that majority of respondents are Somewhat satisfied by the high risk problem, because proper strategies are been taken into consideration for reducing high risk.

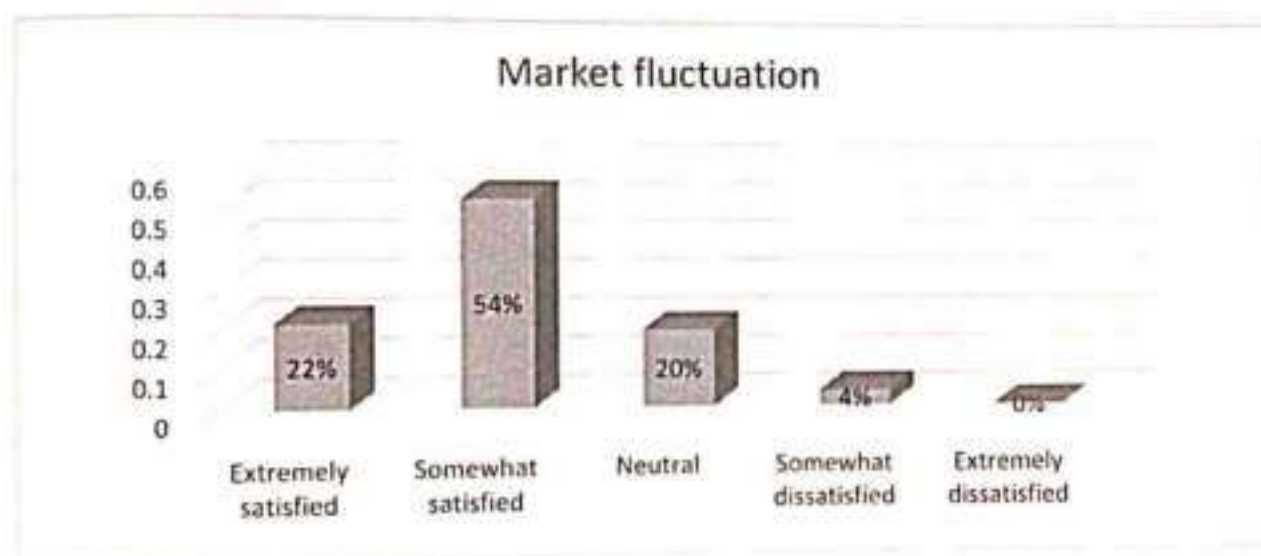
## 4.2 Market fluctuation

Table 4.3

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	11	22%
2	Somewhat satisfied	27	54%
3	Neutral	10	20%
4	Somewhat dissatisfied	2	4%
5	Extremely dissatisfied	0	0%
	Total	50	100%

Market fluctuation

Graph 4.3



The above table and graph shows the problem of market fluctuation faced by investors. Out of total 50 respondents, 54% respondents are Somewhat satisfied and 22% respondents are extremely satisfied by problem of market fluctuation. 20% respondents are neutral and 4% respondents are Somewhat dissatisfied by the problem of market fluctuation. So from above analysis it was observed that majority of respondents are Somewhat satisfied, Because investors do systematic investment plan is followed.



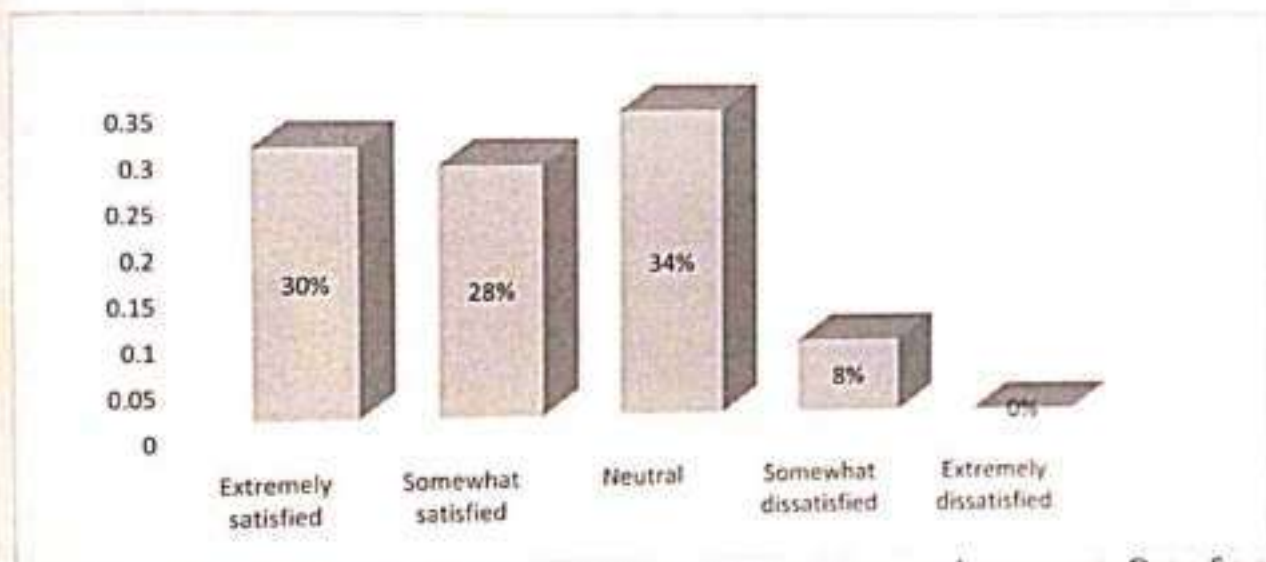
## 4.3 Low return on investment:

Table 4.4

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	15	30%
2	Somewhat satisfied	14	28%
3	Neutral	17	34%
4	Somewhat dissatisfied	4	8%
5	Extremely dissatisfied	0	0%
	Total	50	100%

Low return on investment

Graph 4.4



The above table and graph shows the problem of low return on investment. Out of total 50 respondents, the figures shows that 34% respondents are neutral and 30% respondents are extremely satisfied by the problem of low return on investment. 28% respondents are Somewhat satisfied and 8% respondents are Somewhat dissatisfied by the problem of low return on investment. So from above analysis it was observed that majority of respondents are neutral by the problem of low return on investment, because most of the investors diversify their investments for better return on investment.

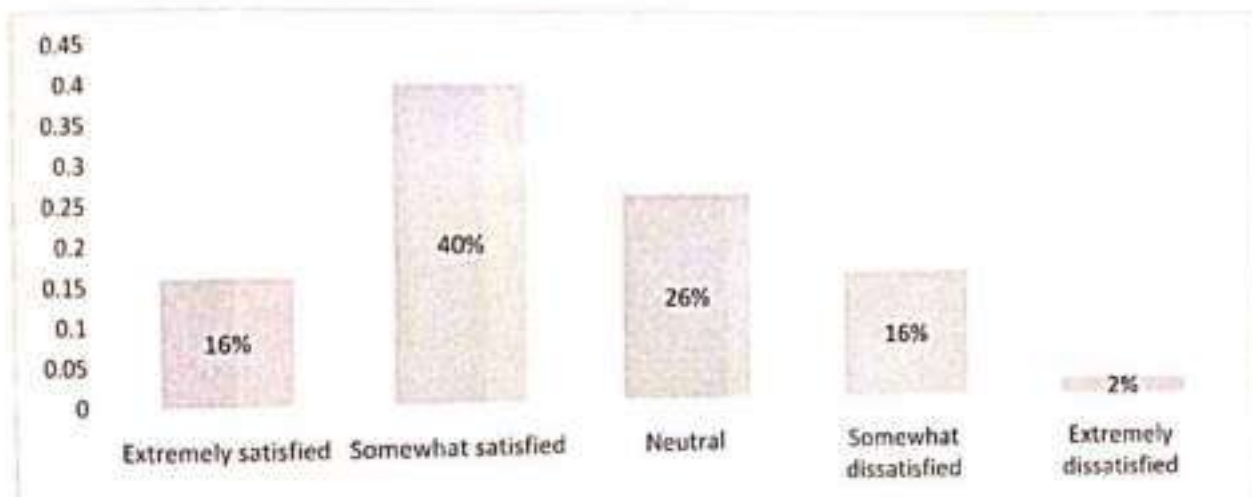
## 4.4. Barrier on investment:

Table 4.5

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	8	16%
2	Somewhat satisfied	20	40%
3	Neutral	13	26%
4	Somewhat dissatisfied	8	16%
5	Extremely dissatisfied	1	2%
	Total	50	100%

Barriers on investment

Graph 4.5



The above table and graph shows the problem of Barriers in investment. Out of total 50 respondents, 40% respondents are Somewhat satisfied and 26% respondents are neutral by barriers in investment. 16% respondents are extremely satisfied and also are Somewhat satisfied. 2% respondents are extremely dissatisfied by the barriers. So from the above analysis it was observed that majority of respondents are Somewhat satisfied because government policies reduces the Barriers from the investment for betterment of the investors.

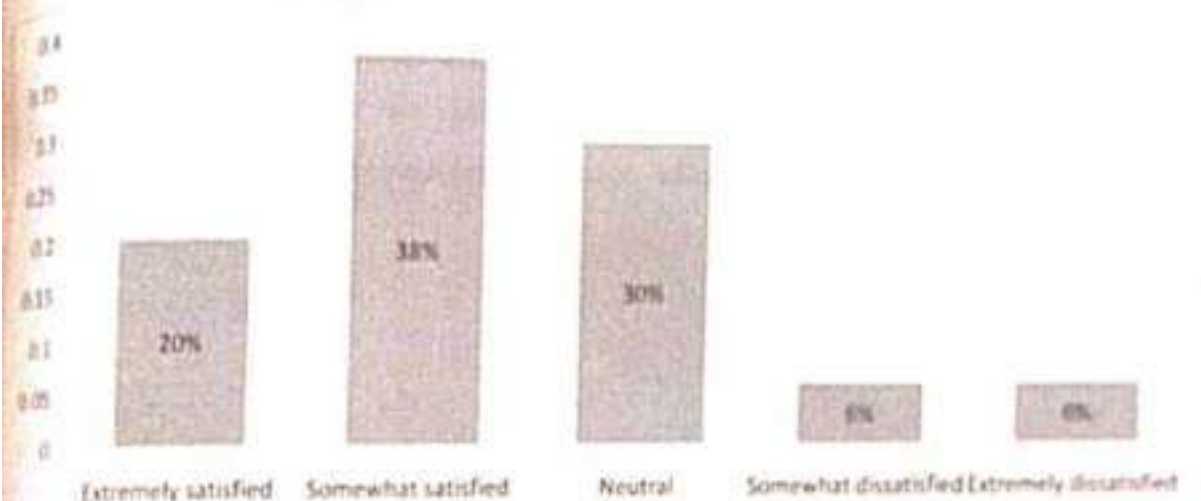
## 4.3 Lack of information:

Table 4.6

Sr no	Particular	No of Respondents	Percentage
1	Extremely satisfied	10	20%
2	Somewhat satisfied	19	38%
3	Neutral	15	30%
4	Somewhat dissatisfied	3	6%
5	Extremely dissatisfied	3	6%
	Total	50	100%

Lack of information

Graph 4.6



The above table and graph shows the problem of lack of information to investors of their investment. Out of total 50 respondents, This figures shows that 38% respondents are Somewhat satisfied and 30% Neutral by problem of lack of information. 20% respondents are extremely satisfied and 6% respondents are Somewhat and also extremely dissatisfied by problem of lack of information. So from above analysis it was observed that majority of respondents are Somewhat satisfied, Because now internet is widely available for all types of update and information.



### 4.3 Conclusion:

After the study of investors in selected study are, it was observed that majority of the respondents investors are graduate and post graduate. It was revealed that majority of investor's annual income is between 1,00,000 - 5,00,000. The majority of investors save every month and invest that money. The majority of investors invest 1000 to 5000 per month in investment plans. It was observed that majority of investors mostly prefer safety of investment and steady growth rate for investment. The study shows that majority of investors invest in equity shares, insurance plan and bank deposits because investors are extremely and in some are Somewhat satisfied by this investment options. The factors such as liquidity, return on investment, safety, risk, tax saving, inflation and government policy. 3 majority factors which motivate investors to invest their money or savings in investment options are high risk, avoid risk and tax saving. It was observed that investors have investment objectives such as income and capital preservation (long term) and growth and income (short term). From study it is observed that investment grow at different growth rate such as Steadily, average rate and fast. The major problem faced by investors are high risk, market fluctuation, low return, barriers and lack of information

## CHAPTER 5

### FINDINGS, SUGGESTIONS AND CONCLUSION

#### 5.1 INTRODUCTION

#### 5.2 FINDINGS OF THE STUDY

#### 5.3 SUGGESTIONS

#### 5.4 CONCLUSION

## CHAPTER 5 FINDINGS, SUGGESTIONS AND CONCLUSION

### 5.1 Introduction:

This Chapter includes the findings of the study which is based on the data analysis. On the basis of findings, the researcher has given suggestions some measures for improvement. After suggesting the researcher has made conclusion about the overall study. That includes the analysis of investors which covers the objectives of the study.

### 5.2 Findings of the study:

1. It was observed that majority (58%) respondents are Upto 25 years old because they are more concerned about their investment and future saving. (Table 1.1)
2. It was seen that (30) respondents are male. (Table 1.2)
3. It was shown that majority of respondents are graduate (42%) because they earned maximum profit in their business and job and investments options secure their money. (Table 1.3)
4. It was revealed that (22) of respondents are businessman or businesswomen because they have good and continuous source of income, by investment they diversify their income and build up their finance. (Table 1.4)
5. It was detected that majority (32%) respondents Annual income is between 1,00,000 - 5,00,000. Because of limited income, they have been investing for last few years to increase their money. (Table 1.5)
6. According to mean of overall responses draw the conclusion that most preferable investment is equity shares because of high return. (Table 2.1)
7. It is revealed that (17) respondents are extremely satisfied by the equity shares because of high return on investment. (Table 2.2)
8. It was observed that majority (34%) of respondents are Somewhat satisfied by the insurance plan because of insurance plan give medium return on investment without much risk as compared to other options. (Table 2.3)
9. It was seen that (20) respondents are neutral for public Provident Fund because public Provident Fund have long lock in period. (Table 2.4)



10. It was concluded that majority (34%) of respondents are neutral for mutual fund because mutual funds are subject to market risk. (Table 2.5)
11. It was observed that (17) respondents are Somewhat satisfied by the bank Fixed deposit because Bank fixed deposits give financial stability along with high return and also protect from market fluctuation. (Table 2.6)
12. It was seen that majority (40%) of respondents are neutral for national pension scheme because National pension scheme has long lock period and there is less awareness among people about its features. (Table 2.7)
13. It was revealed that (24) respondents are neutral for senior citizen saving scheme because the income from the scheme is subject to TDS. (Table 2.8)
14. It was observed that majority (34%) of respondents are neutral for real estate investment because return on investment is high but return on investment get affected by market conditions. (Table 2.9)
15. It was shown that (23) respondents are neutral for RBI Bonds because RBI Bonds have high risk and restrictions on premature withdrawal. (Table 2.10)
16. It was observed that majority (36%) of respondents are neutral for post office monthly income schemes because the invested amount is not tax deductible but is not subject to market risk. (Table 2.11)
17. It was revealed that (20) respondents invest 1000 to 5000 RS per month because they invest funds in part of salary and profit. (Table 2.12)
18. It was seen that majority (56%) of respondents get medium return on the investment because most of investors prefer safe investment options which give returns on stable rate. (Table 2.13)
19. According to the mean of overall responses draw the conclusion that majority of investment decisions are influenced by liquidity, return and safety on investment. (Table 3.1)
20. On the above analysis it was observed that majority (48%) of respondents investment decisions are influenced by liquidity and by return on investment. (Table 3.2 and table 3.3)

21. On the above analysis it was observed that (23) respondents investment decisions are influenced by safety in investment and (17) respondents investment decisions by risk in investment. (Table 3.4 and table 3.5)
22. On the above analysis it was observed that majority (32%) of respondents investment decisions are influenced by Tax saving and by inflation and majority (30%) by government policy. (Table 3.6 and 3.7 and 3.8)
23. It was observed that (27) respondents as an investors are motivated to invest their money by high return and (40) of respondents as an investors are motivated by avoiding risk and restrictions by Tax saving. (Table 3.9)
24. It was seen that majority (80%) of respondents as an investors have long term investment objectives and only (20%) of respondents as an investor have short term investment objective. (Table 3.10)
25. It was detected that majority (52%) of respondents as investors an average rate of growth of the investment. (Table no 3.11)
26. It was revealed (45) respondents as an investors keep themselves updated for better investment. (Table 3.12)
27. According to the mean of overall responses draw the conclusion that majority of investors face the problem of high risk, market fluctuation and low return on investment (Table 4.1)
28. From the above analysis it was observed that majority (20) respondents as an investors face the problem of high risk and (27) respondents as an investors face the problem of market fluctuation. (Table 4.2 and table 4.3)
29. From the above analysis it was observed that majority (34%) of respondents as an investors face the problem of low return on investment and majority (40%) of respondents as an investors face the problem of Barriers on investment. (Table 4.4 and table 4.5)
30. From the above analysis it was observed that majority (38%) of respondents as an investors face the problem of lack of information. (Table no 4.6)

### 5.3 Suggestions:

1. It was necessary to make awareness among the less literate people about the various investment plans.



2. It was necessary that majority of the investors are Male so there should be awareness among the women about the various investment opportunities.
3. It was necessary that government should frame policies for investors by considering their point of view and safe guarding their interest.
4. It was necessary to make appropriate changes in investment opportunities for better of investors such as high liquidity, safety of investment from uncertainties, etc.
5. It was necessary for investors to follow some strategies for better investment and to get better return on investment which is main concern for investors such as diversity their investment, make systematic investment plan and always monitor their investment regularly.
6. It was necessary to keep investors motivated by high return, avoid risk and by Tax saving investment options.
7. It was necessary for investor to keep themselves updated about market trends, growth rate, more investment opportunities, etc.
8. It was necessary to maintain adequate liquidity by investor for financial emergency and should identify its own risk tolerance capacity for better investment decisions.

#### 5.4 Conclusion:

The thumb rule of making a smart investment is to keep a proper understanding of the different types of investment options available in the market. For most of the investors, the purpose of the investment may vary depending in terms of financial objective, period, and risk levels, so forth. Thus, to make money grow, an individual needs to invest in smart investment options that can generate lucrative returns in the long term.

Also as an investors, there should be no confusion between Saving and investment. While saving is considered as a method of wealth collection, despite this, brilliant investment techniques can assist to create more wealth.

From above analysis it was observed that investors should consider following steps for better investment:

- I. Understanding the financial need, i.e., saving or investment.
- II. Decision of asset diversification.



- III. Proper strategy of investment.
- IV. Decision of asset selection.
- V. Evaluating the performance of investment.

The investors always must have knowledge of all the aspects of the investment options. The investor must know his investment goal, risk appetite and so forth. The main purpose of investment options is to mobilize the savings and generate future income. The investment opportunities must offer high return on investment, low risk and highly flexible features to motivate the investors. The investment opportunities must be highly flexible for the betterment of investors. While investing, investors must always keep in mind his priorities and should make systematic investment plan which help him to achieve his investment goals.

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- Book of Research methodology by C. R. Kothari

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**A Study on equity shares and investment options.  
Questionnaire On**

**A study on equity shares and other investments options in India.**

1. Name:- \_\_\_\_\_

2. Email address:- \_\_\_\_\_

2. Age group:-

- |            |          |             |
|------------|----------|-------------|
| 1. Upto 25 | 2. 25-30 | 5. Above 40 |
| 3. 30-35   | 4. 35-40 |             |

3. Gender:-

- |         |           |           |
|---------|-----------|-----------|
| a. Male | b. Female | c. Others |
|---------|-----------|-----------|

4. Education qualification:-

- |               |                        |           |
|---------------|------------------------|-----------|
| 1. SSC        | 2. HSC                 | 5. Others |
| 3. Graduation | 4. Professional degree |           |

5. Occupation

- |                                 |                     |
|---------------------------------|---------------------|
| 1. Businessman or businesswomen | 2. Student          |
| 2. Government employee          | 3. Private employee |
| 4. Professional practice        | 5. Housewife        |

6. Annual income:- \_\_\_\_\_

7. Which investment options you prefer the most?

(1=Extremely satisfied, 4=somewhat satisfied, 3=neutral, 2=somewhat dissatisfied, 1=Extremely dissatisfied)

Sr no	Particular	5	4	3	2	1
1	Equity shares or stock market.					
2	Insurance plan.					
3	Public Provident.					

4	Mutual fund.					
5	Bank Fixed Deposits.					
6	National Pension scheme.					
7	Senior citizen saving scheme.					
8	Real estate investment.					
9	RBI Bonds.					
10	Post office income scheme.					

8. How much you invest monthly in investment options:- \_\_\_\_\_

9. How much return you get on your investment:-

- High
- Medium
- Low

10. Which factors influence your investment decisions?

(5=Extremely satisfied, 4=somewhat satisfied, 3=neutral, 2=somewhat dissatisfied, 1=Extremely dissatisfied)

Sr no	Particular	5	4	3	2	1
1	Liquidity					
2	Return on investment					
3	Safety in investment					
4	Risk In investment					
5	Tax saving					
6	Inflation					
7	Government policy					

11. What motivates you to invest your money or saving in investment opportunities?

- 1. High returns
- 2. Avoid risk
- 3. Tax saving
- 4. Others

12. What is your investment objective?

1. Income and capital preservation (long-term)      2. Growth and income (short term)

13. At what rate do you want your investment to grow?

1. Steadily      2. At an average rate      3. Fast

14. Do you keep yourself updated by various sources of information?

1. Yes      2. No

16. What problems you face in investment opportunities?

(5=Extremely satisfied, 4=somewhat satisfied, 3=neutral, 2=somewhat dissatisfied, 1=Extremely dissatisfied)

Sr no	Particular	5	4	3	2	1
1	High risk					
2	Market fluctuation					
3	Low return					
4	Barriers					
5	Lack of information					






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**Shri Swami Vivekanand Shikshan Sanstha's**  
**Vivekanand College, Kolhapur**  
**(Autonomous)**



**Department of BCA Student Projects 2021-22**

Sr. No.	Name of the Student	Name of the Project
1	BANGE VARSHA NATHAJI	Library System
2	PATIL DHANASHRI BALASAHEB	
3	BARAVAKAR RAHUL BHAGWAN	Hotel Management System
4	MANE TEJAS DHANAJI	
5	BENDRE SHATAKSHI MAHESH	Inventory Management System
6	KAMBLE PRERANA SANJAY	
7	BHAPKAR SAMARTH SANTOSH	Chrono Computer
8	VARNE ABHISHEK JAYANT	
9	BHOSALE AKHILESH KEDARNATH	Claws and Paws Pet Shop
10	INJULKAR KARAN SACHIN	
11	BHOSALE ROHIT BAJIRAO	College Management System
12	GOPHANE SWAROOP SOMNATH	
13	BORKAR SARVESH SHAILESH	Doctor Appointment System
14	SUTAR MANOJ SUBHASH	
15	BUJAWADE RAVIRAJ RAMCHANDRA	Garage Management System
16	DESAI JAYDEEP MAHESH	
17	CHAVAN PRIYANKA PRAKASH	Grossary Shop System
18	PATIL SNEHAL SATISH	
19	CHOUGULE POOJA RAJENDRA	Car Rental System
20	PATIL HARSHADA SHIVAJI	
21	DABHADE MEGHASHAM DAGADU	Kalpataru House of Love & Care
22	JAIN PARV NEERANDRA	
23	DALAWAI SNEHAL GURUNATH	Farming Seeds Store Management
24	JAMDAR APARNA SANJAY	

25	DAVANDE PRAKASH SHIVAJI	Virtual Bank
26	TELVEKAR SANTOSH LAXMAN	
27	DEVTALE PRATIK PRABHAKAR	LaxmiGaggery
28	JAGATAP KETAN KRUSHNAT	
29	DSOUZA ARNOLD ANDREW	Hotel Billing System
30	PATIL SATYAJIT SARJERAO	
31	GHORPADE KIRTI NIVRITTI	Dental Clinic Management System
32	HARALE ISHA SHIVAJI	
33	HIREMATH PRATHAMESH MAHESH	Lab Pathology
34	SINGH SAMEER DEVENDRA	
35	INANIYA RAVI RAMKISHOR	Ayurveda for Wellness
36	SANADI TAHIR ASIFALLI	
37	KALE ROHAN SACHIN	Computer Shop Management System
38	MANE SURAJ	
39	KAMBLE SAMRUDDHI KRUSHNAT	FOOTWARES
40	KAMBLE SHRUTI ANANDA	

  
Mr. Sunny S. Kale

Coordinator, BCA

A  
Project Documentation  
On  
SHREE FURNITURE  
Submitted to  
Department of Bachelor of Computer Application  
VIVEKANAND COLLEGE KOLHAPUR

Submitted by  
Miss. Vaishnavi Pradip Raut  
Miss. Priyanka Anil Vadam

Under the guidance of  
Prof. Mrs. R.S. Sawant

Department of Bachelor of Computer Application  
Academic Year 2021-2022



# CERTIFICATE



VIVEKANAND COLLEGE, KOLHAPUR

This is to certify that,

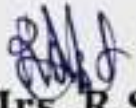
Miss. Vaishnavi Pradip Raut

Miss. Priyanka Anil Vadam

B.C.A- III (SEM VI) has submitted this project entitled "SHREE FURNITURE". For the present semester, this project is carried out under my guidance and supervision and Best of my knowledge, this is their original work and not been presented earlier.

**Place: Kolhapur**

**Date: 4/6/2022**

  
**Mrs. R.S. Sawant**  
**(Guide)**

  
**(Examiner)**

  
**Mr.S.S.Kale**  
**(Co-ordinator)**

# DECLARATION

### Declaration

We the undersigned here by declare that this report entitled "SHREE FURNITURE" is our original work prepared under the guidance of "MRS. R.S. Sawant".

In this project reports are based on the data collected by us. We declare that, we have referred the windows application given in bibliography for creation of the project work and have not copied any written material. We understand that any such copy is liable to be punished in any way, the college authorities deemed to fit.

Place : Kolhapur

Date : 4/6/2022

Yours Faithfully,

Miss. Vaishnavi Pradip Raut Raut

Miss. Priyanka Anil Vadam Vadam



# ACKNOWLEDGEMENT

### Acknowledgement

It is our great pleasure that we submitted the project entitled "SHREE FURNITURE" we are thankful to MR.S.S. KALE, our teachers and staff who had helped and supported us for completing this project.

We are grateful to "PROF.MRS. R.S. Sawant" for valuable Guidance and all possible help to complete the project. And at last, very thankfully to those friend and staff members who had helped us.

Place: - Kolhapur

DATE: 4/8/2022

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# INTRODUCTION

## INTRODUCTION

An online furniture shop that allows users to check for various furniture available at the online store and purchase online. The project consists of list of furniture products displayed in various models and designs. The user may browse through these products as per categories. If the user likes a product, he may add it to his shopping cart. Once user wishes to checkout, he must register on the site first. He can then login using same id password next time. Now he may pay through a credit card or cash on delivery. Once the user makes a successful transaction, he gets a copy of the shopping receipt on his email id. Here we use .net framework to make the entire frontend. The middle tier or code behind model is designed in c#. And sql serves as a backend to store furniture lists and inventory data Thus the online furniture shopping project brings an entire furniture shop online and makes it easy for both buyer and seller to make furniture deals.



# Existing System

### Existing System

In the present system, the online shopping is very backward. The number of products available is also very less. The existing system is manual system. Needs to be converted into automated system. As it has a risk of mismanagement of data, less security, no proper co ordination between die rent application and users, fewer users-friendly, accuracy not guaranteed and not in reach of distant users.

- In existing system Furniture shopping can done in a manual way, the customer has to go for shopping, and then he is having the possibility to choose the product whatever the wants
- It is a time-consuming process.
- The system has to be automated
- In existing system, the customer is completely depending on the manual process for buying the furniture products
- Manual process is a time-consuming factor. And when customer approaches

# Proposed System



### **Proposed system**

The aim of proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system. The system provides proper security and reduces the manual work.

- Security of data.
- Ensure control of the higher processing.
- Minimize manual data entry.
- Minimum time needed for the various processing.
- Greater efficiency.
- Better service.
- User friendliness and interactive.
- Minimum time required.

# Objective

### Objective

The main objective of the system is to develop online Shree Furniture for:

- To Maintain the whole information about the sale.
- To Maintain whole information about customer
- To Maintain the information about the Purchase.
- Generate reports.
- To access information of a particular furniture type.
- To store and retrieve details about sale/purchase
- To promote fast and reliable transaction to the customers.

Features



# Features

### Features

- The main purpose for developing this website is to manage the category of the furniture data wise. So, all furniture category will be managed by admin and user will be able to see furniture category. Admin can see the list of all the furniture category and filter it according to the customers.
- Admin and User can add new customers records.
- Admin and User can see the list of customers details.
- If you provide shoppers a a possibility to style furniture pieces and select the best-suited color or configuration, enable them to visualize the result immediately too.
- Adding details like the type of design, wood, color and brand etc. A picture of the furniture in a well-furnished room might give the buyer a good idea about how it will look like in real home.
- To achieve global standard quality and production.
- Inventory features are integrated with the sales department, customer order details and price.

## **Need and Scope of System**



### **Need and Scope of System.**

**The system functions and features of our system include the following:**

The system is made of a combination of modules that work in collaboration with each other and make it beneficial to accomplish the main aim of the scheme.

**Registration:** User's information has to be compelled to be registered within the system thus on establish every one of them unambiguously and do the required group action as real potential. Like on the name of the bill are issued. On the far side, this plenty of things require measure there wherever we will reference him.

Without registration, there are a few options and pages one user can see which are landing on the home page and taking the features to read but he won't be allowed to use those. For use, he will have to register. One person needs to put all the details properly and precisely as it will be helpful in identifying them and believing that he is the real person who has booked for the same

#### **Login:**

**User:** After registration one will log within the system either on the behalf of the user. When this he has the opposite helpful interfaces accessible for any actions. Here either bride or groom both have to log in with their unique identity and password. After this, they will be directed to the main user interface from where they have further options.

**Admin:** Admin has the official powers to control the flow of the data from one part of the system to the other. He has the power to manipulate the access of the user of the data. The main purpose of this account is to make the user data relevant and then giving the inputs to the other interface module and get the timetable according to the wish we want to create for a particular type of inputs.

**Furniture item:** The furniture details are given here to mention in the selection process of the user. The admin maintains These he determines the type of furniture where it will be utilized, design type, the wood type used, pricing of the furniture is also given here. Here they can choose the items also.

**Orders:** Order of the furniture is stored in this interface after selecting the item for purchase the choice the user has is one is the prepared item another customized item for which they depend upon his choosing. He gets confirmation in this interface after doing the necessary filling of attributes.

---

# Requirement Gathering



## Requirement gathering

### Economic Feasibility

Economic an analysis is most frequently used for evaluation of the effectiveness of the system. More commonly known as cost/benefit analysis the procedure is to determine the benefit & saving that are expected from a system & compare them with costs, decisions is made to design & implement the system.

### Technical Feasibility

Technical feasibility centers on the existing manual system of the test management process & to what extent it can support the system. According to feasibility analysis procedure the technical requirements such as software facilities, procedure, inputs are identified. It is also development activities.

### Operational Feasibility

This test of feasibility asks if the online furniture shop will work with least difficulties when it is developed & installed. The technical staff has sufficient knowledge of the online furniture shop tools access & browse the blood bank site Hence it is concluded that the system is operationally feasible.

# Language Specification

## Language specification

### Visual studio:

Visual Studio is an Integrated Development Environment (IDE) developed by Microsoft to develop GUI(Graphical User Interface), console, Web applications, web apps, mobile apps, cloud, and web services, etc. With the help of this IDE, you can create managed code as well as native code. It uses the various platforms of Microsoft software development software like Windows store, Microsoft Silver light, and Windows API, etc. It is not a language-specific IDE as you can use this to write code in C#, C++, VB (Visual Basic), Python, JavaScript, and many more languages. It provides support for 36 different programming languages. It is available for Windows as well as for macOS.

### C#:

- C# being a .NET language, it supports language interoperability, i.e. C# can access code written in any .NET compliant language and can also inherit the classes written in these languages. This is not possible in Java.

The code written in C#, on compilation generates an '.exe' or '.dll' file which is also called Portable Executable file. These files contain MSIL (Microsoft Intermediate Language) code. As against this, the Java code on compilation generates a '.class' file, which contains byte code.

The portable executable file of C# can contain any number of classes, whereas, the '.class' file in Java contains only one class.

The methods in C# are not virtual by default. On the contrary, methods in Java are virtual by default, which degrades the performance.

The classes in C# are grouped in Namespaces, whereas, classes in Java are grouped in Packages.



# INTRODUCTION TO ASP.NET

## INTRODUCTION TO ASP.NET:

ASP.NET is a web application framework designed and developed by Microsoft. ASP.NET is open source and a subset of the .NET Framework and successor of the classic ASP (Active Server Pages). With version 1.0 of the .NET Framework, it was first released in January 2002. So a question comes to mind that which technology we were using before the year 2002 for developing web applications and services? Answer is Classic ASP. So before .NET and ASP.NET there was Classic ASP.

ASP.NET is built on the CLR (Common Language Runtime) which allows the programmers to execute its code using any .NET language (C#, VB etc.). It is specially designed to work with HTTP and for web developers to create dynamic web pages, web applications, web sites, and web services as it provides a good integration of HTML, CSS, and JavaScript.

.NET framework is used to create a variety of applications and services like Console, Web, and Windows, etc. But ASP.NET is only used to create web applications and web services. That's why we termed ASP.NET as a subset of the .NET Framework.

### **.NET FRAMEWORK**

The .Net framework is a software development platform developed by Microsoft. The framework was meant to create applications, which would run on the Windows Platform. The first version of the .Net framework was released in the year 2002. The version was called .Net framework 1.0. The .Net framework has come a long way since then, and the current version is 4.7.1.

The .Net framework can be used to create both – Form-based and Web-based applications. Web services can also be developed using the .Net framework.

The framework also supports various programming languages such as Visual Basic and C#. So developers can choose and select the language to develop the required application. In this chapter, you will learn some basics of the .Net framework.

## **CSS:**

CSS saves time – You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.

Pages load faster – If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times. Easy maintenance – To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.

Superior styles to HTML – CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.

Multiple Device Compatibility – Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.

Global web standards – Now HTML attributes are being deprecated and it is being recommended to use CSS. So it's a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.

# System Analysis

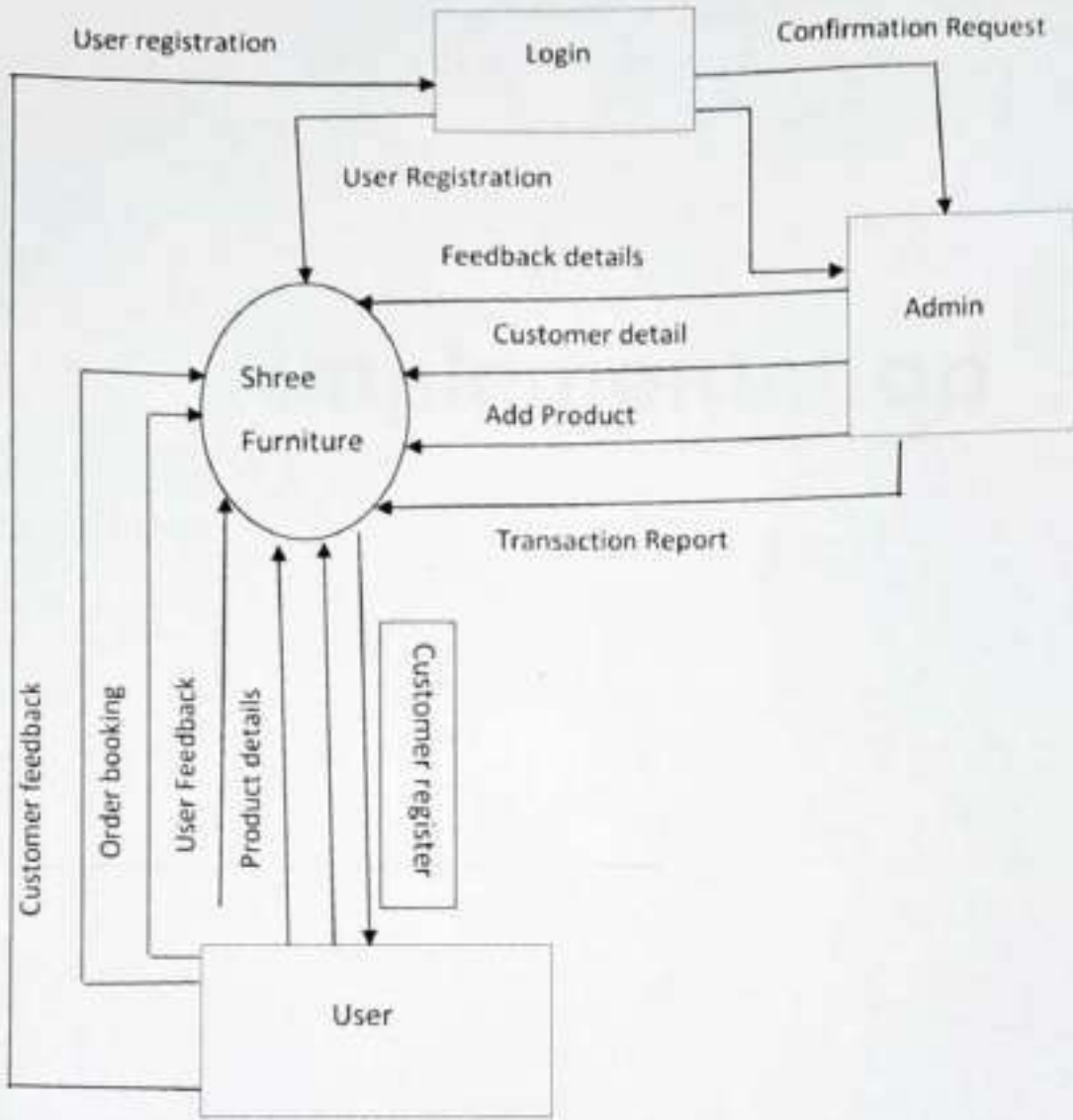


Entity Relationship Diagram [ER]



### Data Flow Diagram [DFD]

Data Flow Diagram



# Implementation

## Implementation

### Software Requirement:

- 1) Microsoft Visual studio 2013 Ultimate.
- 2) Microsoft .Net Framework.
- 3) Front End: C# NET.
- 4) Back End: Microsoft Access Database 2007.

### Hardware Requirement:

- 1) CPU: Pentium-IV Processor or any Processor.
- 2) Hard disk: 40GB or above.
- 3) RAM: 1GB or above.



# System Design

## System design

## Database design:

user_data	
Field Name	Data Type
o_id	AutoNumber
cname	Text
username	Text
gender	Text
mobile	Number
email	Text
pass	Text
address	Text

user_data		user_feedback	
Field Name	Data Type		
uemail	Text		
mobile	Number		
feedback	Text		

SHREE FURNITURE

user_data user_feedback product		
Field Name	Data Type	
? p_id	AutoNumber	
p_name	Text	
price	Number	
img	Text	

user_data user_feedback product orders		
Field Name	Data Type	
o_id	AutoNumber	
p_id	Number	
name	Text	
amount	Number	
quantity	Number	
date_time	Date/Time	

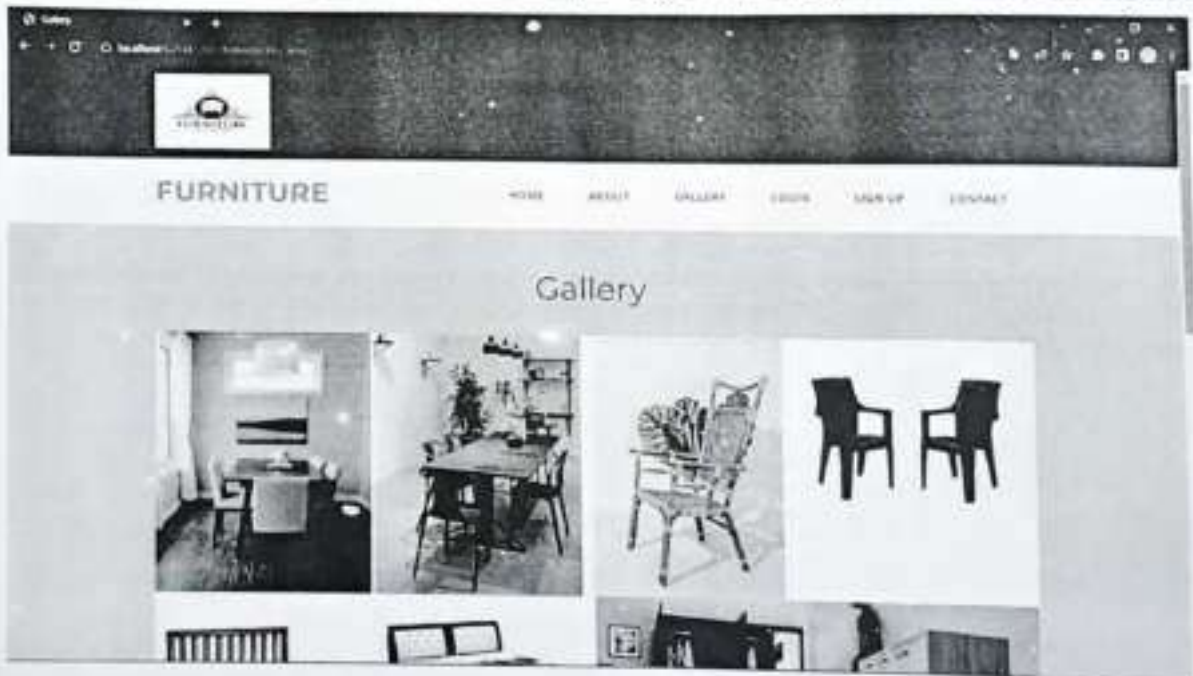
SHREE FURNITURE

Field Name	Data Type
username	Text
passadmin	Text
mobile	Number
email	Text

Field Name	Data Type
first_nm	Text
last_nm	Text
mobile	Number
email	Text
msg	Text



Output Design:





**Change Password**

Email Id

Mobile Number

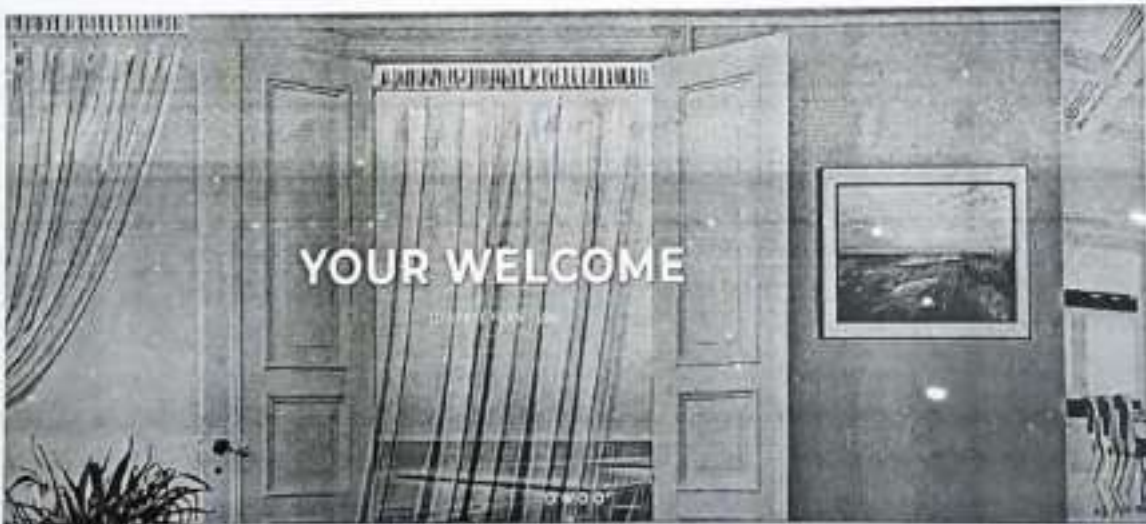
Feedback

Furniture Id	Name	Image	Price	Quantity	Buy
101	Dining Table		25000	<input type="text"/>	<input type="button" value="order"/>
102	Dining Table - Pkg		10000	<input type="text"/>	<input type="button" value="order"/>
103	Sofa Set		20000	<input type="text"/>	<input type="button" value="order"/>
104	Single Sofa		10000	<input type="text"/>	<input type="button" value="order"/>
107	Double Bed		30000	<input type="text"/>	<input type="button" value="order"/>
108	Double Bed		30000	<input type="text"/>	<input type="button" value="order"/>



### Furniture Details

Furniture Name	Image	Details	Use Material	Color
Dining Table small		Height * width * Depth * 110cm (2ft 4in * 3ft 9in)	Engineered wood	Brown
Dining Table big		Height * width * Depth * 200cm (2ft 4in * 3ft 9in)	Engineered wood	Dark Black





## Crystal Design:

5/31/22, 8:12 AM

## Admin view product

Furniture Id	Furniture Name	Image	Price
101	Dining Table	-img1dtable1.png	25000
102	Dining Table -Dg	-img1dtable2.png	10000
103	Sofa Set	-img1sofa2.PNG	30000
105	Single Sofa	-img1sofa1.png	10000
107	Double Bed	-img1bed2.png	30000
108	Double Bed	-img1bed2.png	30000
109	Single Bed	-img1bed1.png	15000
110	Single Bed	-img1bed1.png	15000
111	Plastic Chair	-img1chair2.PNG	1500
112	Plastic Chair	-img1chair2.PNG	1500

5/31/22, 8:28 AM

## Customer Data

Id	Name	Username	Gender	Mobile	Email	Password	Address		
14	Priyanka	plu	1	67452378	priyanka@gmail.com	321	Kothapur	Select	Delete
15	Abhishek	abhi	0	9876543243	abhi@gmail.com	456	Kothapur	Select	Delete
16	Vaishnavi	vaishu	1	67452372	vaishu@gmail.com	09	sangli	Select	Delete
17	Samarth	Sarmaya	0	88508537	sam@gmail.com	977	umhgaon	Select	Delete
18	Nita Patel	Nit	1	9823657483	nit@gmail.com	87	belgaon	Select	Delete
19	Santosh	Santu	0	765436789	santu@gmail.com	1911	ichalkaranj	Select	Delete
20	Santosh	Santu	0	765436789	santu@gmail.com	1911	ichalkaranj	Select	Delete
12	Pratap	pratap123	male	6336363363	pratap111@gmail.com	pratap123	bharenagar	Select	Delete

## SHREE FURNITURE

5/31/22, 8:16 AM

### Order Detail

order id	Product id	Product Name	Amount	Quantity	Total	Order Date	Select	Delete
3	110	Single Bed	15000	5	15000	06-05-2020 00:00:00	Select	Delete
3	105	Single Sofa	10000	12	10000	25-06-2020 00:00:00	Select	Delete
13	110	Single Bed	15000	7	15000	06-08-2020 00:00:00	Select	Delete
13	107	Double Bed	30000	7	30000	09-09-2020 00:00:00	Select	Delete
14	101	Dining Table -small	5000	2	5000	20-05-2022 00:00:00	Select	Delete
16	101	Dining Table -small	5000	2	5000	20-05-2022 00:00:00	Select	Delete
16	103	Sofa Set	20000	3	20000	20-05-2022 00:00:00	Select	Delete
14	101	Dining Table -small	5000	2	5000	20-05-2022 00:00:00	Select	Delete
14	105	Single Sofa	10000	2	10000	20-05-2022 00:00:00	Select	Delete
14	103	Sofa Set	20000	3	20000	20-05-2022 00:00:00	Select	Delete

### Customer Suggestion

5/31/22, 8:05 AM

First Name	Last Name	Mobile	Email	Suggestions
jayesh	kalsariya	7777958761	jayeshcool123@gmail.com	Add multiple items
Sufiyan	Khilji	7777958761	sufiyankhilji123@gmail.com	Add multiple item
jayesh12	kalsariya12	7777958761	jayeshcool123@gmail.com	Add multiple items
vaishnavi	Raut	7584038273	vaishu@gmail.com	no
vaishnavi	Raut	7584038273	vaishu@gmail.com	no

## CONCLUSION

### CONCLUSION

- Today's more people use online shopping as faster, more comfortable and not restricted by assortment system of shopping
- There is lot of websites and tools to help consumer with online purchasing decision.
- Moreover, different product price comparison services help customers to compare the price if identical goods offered by different sellers.
- Furniture could be manufactured by a variety of material such as wood, metal, plastic and other.
- In this project, the user is provided with a website that can be used to purchase furniture online. To implement this as a web application we used asp.net.
- So, if you are looking for the best quality furniture and home decor that add personality, style and elegance to your home, then online website is the right place to search for.



## Limitations

### Limitations

There are some limitations in our site

To developed system has following limitations:

- 1) We don't have service of order on calls.
- 2) Site is in developing stage so it has some bugs sometimes we are working on the bugs with our team.
- 3) We have not created cart, or other features for online shopping.
- 4) If the order is placed successfully, the customer cannot cancel the order.

## Reference

## Reference

### Links:

1. [www.google.com](http://www.google.com)
2. [www.youtube.com](http://www.youtube.com)
3. [Wikipedia.org](http://Wikipedia.org)
4. [www.w3schools.com](http://www.w3schools.com)
5. <https://nevonprojects.com/online-furniture-shop-project/>





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**Vivekanand College, Kolhapur**  
**(Autonomous)**



**Department of BBA Student Projects 2021-22**

Sr. No.	Name	Title of the Project
1	ACHARYA PREM MOHANKUMAR	B2B Sales and brand Promotion' With special reference to 'Ideometrics Private Limited'
2	AWATI SHANTANU MANIKCHAND	"Study of production cycle" with special reference to Mahalakshmi Reshellers Pvt. Ltd.
3	BADAVE ANUJ MOHAN	"A study of consumer perception of siyarams" with special reference to "Arihant Kapad Bazar".
4	BONDRE KRUPA DIGAMBAR	"A Study of Product line and Product Depath" with reference to gharkul company sawantwadi".
5	CHOUGULE AKANKSHA ARUN	"A study of mix marketing with special reference to "Blue light Kolhapur".
6	CHOUGULE SANKALP SUKANT	"A Study on HR Process with special reference to sound casting Pvt. Ltd.
7	DABHOLE VIVEK DATTATRAY	A Project report on total quality management with reference "Shiram foundary Pvt. Ltd Shirol MIDC".
8	DIPANKAR ASANG SANJAY	" A customer staisfaction after services with special reference to Mahalakshmi hostel vhanur.
9	GAT DARSHAN DADASO	A Project report on to study various stock levels with sepicel reference to Deepak Marketing Kolhapur."
10	JADHAV PRITHVIRAJ VIKRAM	A Project Report on "A Study of the SUPPLY Chain Managemnt with reference to Lays Shravani Agency Hatkalangle"
11	KAMBLE ABHIJEET ANANDA	A Project Report on " A study of Various Loans Of Urban-Co - Operative Bank LTD Khasbag Kolhapur "
12	KHOT PRANOTI PRAKASH	A Project Report on " To study the consumer buying behaviour of LG Brand with reference to Piyu Electronic & Electicals "
13	KOLI RAVIRAJ SADASHIV	A Project Report on " A study of supply Chain Management with reference to Nath Cattle Feeds, 5 Star MIDC Kolhapur "

14	KULKARNI MALHAR DEEPAK	A project report on " A comparative study of different types of mutual funds offered by SBI MF and ICICI Prudential MF with reference to sunil patil (MFD), Kolhapur"
15	MAGDUM RUSHIKESH TANAJI	A project report on 'Consumer's POV (Point of view) towards digital Advertising with reference to BARCADLY SERVICES"
16	MALI SAURABH SHANKAR	A Project Report on " A study of Marketing Distribution Channel of Nerolac Paint for Kolhapur Region with reference to Parshwa Hardware,Kolhapur"
17	MALI SWAPNIL SUNIL	A Project Report on " A Study of Marketing Strategies with reference to Parihar Studio Shiye, Kolhapur"
18	MANE SHWETA VINOD	A Project report on " A Study of Sales of Sales Promotion for Rajmandir Icecream with reference to Rjmandir Icecream, Nagala Park, Kolhapur
19	MOMIN SAHIL MAHAMMAD SHARIF	A Project Report on "A study on HR Practices with reference to Shetkari Vinkari Soot Girmi Co. LTD"
20	MORE PRIYA DATTATRAY	A Project report on " A Study of Recruitment Process and Selection Process with reference to Sai Services PVT LTD in Shibaji Udyamnagar Kolhapur"
21	MORE RIYA CHANDRAKANT	A Project Report on " Factors Affecting online Shopping Behaviour"
22	MORE SAKSHI MANOHAR	A Project Report on " Study of Customer Relationship Management with reference to Star Bazaar , Udyamnagar Kolhapur"
23	MOTE TEJAS BIPIN	A Project Report on A study of cost sheet with reference to Shree Chhatrapati Shahu Milk and Agro Producer Company Private LTD, Vhannur"
24	NAGORI KUSHAL DILIP	A Project Report on A study of Marketing Strategies of Levi Strauss and Company with reference to Vyankateshwara Garments, Kolhapur"
25	PADALKAR PRADNYA DILIP	A Project Report on A study of Production Process with reference to Prime Safety Shoes, Kolhapur
26	PALGHAT KRISHNARAJ ANANTH	A project report on " A study on search engine optimization process (SEO) in digital marketing with reference to Morise marketing, kolhapur"
27	PARGAVKAR SIDDHESH SANJAY	A Project Report on "Marketing Mix Of Gold's Gym with reference to Gold's Gym, kolhapur "
28	PATIL OMKAR SANJAY	A Project Report on " A Study of Sales Forecasting with reference to Riddhi Siddhi Interprises"

29	PATIL PRATHAMESH MAHIPATI	A Project Report on "A Comparative study between SBI Life and LIC and their Performance with reference to SBI Life and LIC, Kolhapur"
30	PATIL RAJVARDHINI MARUTI	A Project Report on " To study the Customer Satisfaction Of Royal Enfield Motors with special Reference toRoyal Enfield Motors, Kolhapur"
31	PATIL RUSHIKESH SANDIP	A Project Report on " A Marketing Effects of jio on Telecommunication Sector in India with reference to Mahalaxmi Communication, Laximipuri , Kolahpur"
32	PATIL RUTWIK NANDKUMAR	A Project report on " A Study of logistics Management with reference to Neha Roadlines,Shiroli MIDC, Kolhapur
33	PATIL SHRADDHA JINGONDA	A Project Report on " A Case study of Solar Water Heater System with reference to Sagar sales and services, Kolhapur
34	PATIL SHWETA RAJENDRA	A Project Report on " A Study of Labour Absenteeism and Labour Laws with reference to Sai Services , Kolhapur
35	PATIL SOURABH BHARAT	A Project Report on "A Study of Marketing Strategies of Levi Strauss and Company with reference to Vyankateshwara Garments , Kolhapur
36	PATIL VAIBHAV RAJENDRAKUMAR	A Project Report on " A study of Recruitment and Selection Process of Employee with reference to Micro Engineers Sawantpur Vasahat Kirloskar wadi "
37	PAWASKAR SHANTANU DINESH	A Project Report on " A study of Promotion and Retailing Activities with reference to Malabar Gold Outlet, Kolhapur "
38	PIDIYAR VYANKATESH MADHUSUDAN	A Project Report on " A Distribution Channel on Gokul Milk Dairy with reference to Gokul Milk Dairy" Kolhapur
39	RANE MANDAR SANJAY	A Project Report on " The Study of Retail Marketing Of Agro Products with Reference to Lucky Sheti - Seva Kendra, Kagal "
40	RATWANI DIVYA GIRDHARI	A Project Report on " TO Study the Impact of Covid Pandemic on the Mindset of Employees with the help of Motivational Theories" with reference to Shimpukade Engineering PVT, LTD
41	RAUT ARPITA DATTATRAYA	A Project Report on " To Study Social work during the pandemic with reference to Dreame team Kolhapur"
42	SANKPAL ADITYA KUMAR	A Project Report on " Analysis Regarding Sales and Distribution with reference to Dhariwal Industries LTD, Manikchand Oxyrich"

43	SAWANT RUTUNJAY KISAN	A Project Report on " To Analyze the preference of the Investores in Stock Market with reference to Safecap Tradelink"
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Dr. Revati Patil

Coordinator of BBA



**A PROJECET REPORT**

**ON**

**“A STUDY ON SEARCH ENGINE OPTIMIZATION  
PROCESS (SEO) IN DIGITAL MARKETING”**

**WITH SPECIAL REFERANCE TO**

**“MORISE MARKETING, KOLHAPUR”**

**SUBMITTED TO**

**SHIVAJI UNIVERSITY, KOLHAPUR**

**IN PARTIAL FULFILLMENT OF THE DEGREE OF,**

**BACHELOR OF BUSINESS ADMINISTRATION (BBA)**

**BY**

**Mr. KRISHNARAJ ANAND ALGHAT**

**UNDER THE GUIDENCE OF**

**MR. M.S.MUJAWAR**

**THROUGH,**

**THE PRINCIPAL,**

**VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)**

**2021-2022**



**MORISE**  
MARKETING  
Attract · Engage · Convert

## **Certificate of Completion**

This certificate hereby is awarded to MR.KRISHNARAJ ANANTH PALGHAT of BBA 3rd VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS) for the completion of his Final Year Project successfully in our firm MORISEMARKETING.

The project 'A study on Search Engine Optimization in Digital Marketing' was successfully completed by him during his internship, which commenced from Dec 2021 and concluded in May 2022. During this process, we found him as a dedicated and hardworking intern, not only regarding the project, but also towards the firm.

We congratulate him for finishing this project along with his commitments made towards the firm. We wish him the best luck for the future.

**Anil Wadikar**

**CEO, Morise Marketing**



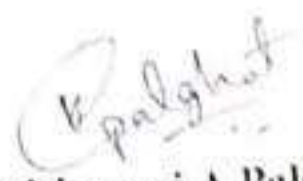
## DECLARATION BY STUDENT

The undersigned hereby declare that project entitled "A STUDY ON SEARCH ENGINE OPTIMIZATION PROCESS (SEO) IN DIGITAL MARKETING" with special reference to MORISE MARKETING KOLHAPUR Written and submitted under guidance of MR. M.S. MUJAWAR, my original work. The empirical findings in this report are based on data collected by me during the course of project work. I have not copied any matter from any other report submitted earlier or being submitted this year for a similar purpose.

I understand that any such copying is liable to be punished in a way institute and authority deems to fit.

Date - 29/06/2022

Place- KOLHAPUR

  
Krishnaraj A Palghat


## ACKNOWLEDGEMENT BY GUIDE

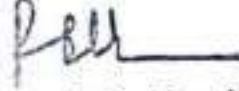
This is to certify that project report entitled "A STUDY ON SEARCH ENGINE OPTIMIZATION PROCESS (SEO) IN DIGITAL MARKETING" with reference to MORISE MARKETING KOLHAPUR, is written and submitted by Mr. KRISHNARAJ ANANTH PALGHAT. Under the guidance of Mr. M.S.MUJAWAR in partial fulfillment of his work for the award of degree of Bachelor of Business Administration (B.B.A) under guidance and supervision. Submitted to Shivaji University Kolhapur.

To the best of my knowledge and belief the matter presented in this report has not been submitted earlier for the award of B.B.A.



  
MR. M.S. MUJAWAR  
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## ACKNOWLEDGMENT BY STUDENT

I take this golden opportunity to thank "MORISE MARKETING" for allowing me to undergo 5 months of Internship in the organization.

It gives me an immense pleasure in acknowledging the valuable assistance extended to me by various personalities in the completion of this project. First of all, I sincerely express my gratitude towards **MR. ANIL WADIKAR (CEO)** from MORISE MARKETING for helping and guiding me throughout the project by training & investing his precious time in their esteemed organization.

I would also like to thank **MRS. POOJA SANGAR (SEO Head)** for helping out me during this process. Lastly I would like to express my gratitude to my project guide **MR.M.S.MUJAWAR** for giving me valuable instructions though out my training for without which my project would have not being completed. I would like to express my sincere thanks also to my coordinator **Mr. S.S. KALE**

Finally, I would like to thank to all my faculty members of Vivekananda collage friend's family members and all unseen hands who have helped me in successful completion of my project.

Place- Kolhapur

Date - 29/06/2022



MR. KRISHNARAJ PALGHAT

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# CHAPTER I

## INTRODUCTION TO THE STUDY

## **1.1 Introduction to study:**

Digital Marketing is one of the fastest growing industry not only in India, but the whole world. Rapid digitization and changing customer behavior are becoming the key contributors for the growth of this industry. Companies are shifting from traditional marketing to marketing on the online channels like websites, social media, blogs etc. Employment opportunities are also growing exponentially.

The process of digital marketing includes activities like search engine optimization, social media marketing, content marketing, targeted ads, etc. Digital marketing has a very huge scope, because of no geographical barriers in it. At the same time it poses huge competition for the players in the market, due to updating technology, core competencies and reliability of the service provider. The service can be provided from the any corner of the world, which has a good internet connection and computers to work.

The following study has been conducted, by practically working on ground level to study the process of SEO (search engine optimization) in a digital marketing company, challenges faced by the company, scope for the business, mission of the company in detail with respect to 'MORISE MARKETING', Kolhapur.

The Study will help the students and aspirants willing to excel in the field of digital marketing by knowing the process and skills required to work in an ideal digital marketing agency.

## **1.2 Purpose of Study:**

The main purpose of the study is to understand the process of Search Engine Optimization in digital marketing in detail with respect to digital marketing company 'MORISE MARKETING' Kolhapur.

## **1.3 Objectives of Study:**

1. To understand the process of SEO in digital marketing practically by working on field.
2. To study scope for the business in the marketing industry.
3. To understand the nature of services provided by the company.
4. To understand the requisites for an aspiring student in digital marketing.

## **1.4 Hypothesis:**

1. The process of SEO takes around 6 months to show results.

## **1.5 Research Methodology:**

The study is descriptive in nature. The research design of the project deals with the understanding the in-depth process of SEO in digital marketing by 'MORISE MARKETING'.

### **Primary data:**

The primary data includes the data and information recorded by self, by working as an intern for the duration of 5 months from Dec 2021 to May 2022.

It also includes data collected through questionnaire, Personal interview and observation.

### **Secondary Data**

The study also includes some information collected through authoritative websites and books related to the field of search engine optimization in Digital marketing.

### **1.6 Scope of the study:**

1. The study is restricted to only 'MORISE MARKETING', Kolhapur.
2. The study is restricted to the process of Search Engine Optimization in the Digital marketing in the company itself.
3. It would help the Novice and aspirants to understand the nature of the work and process of SEO.

### **1.7 Significance of the study:**

1. The study will shed light on the in depth process of components like Search engine optimization and social media optimization of digital marketing.
2. To be a part of practical application of SEO.

### **1.8 Limitations of the study:**

1. The study is limited to only 'MORISE MARKETING'.
2. The study is limited only to the SEO process in digital marketing



**CHAPTER II**  
**INTRODUCTION TO THE**  
**ORGANIZATION**

## 2.1 Introduction to the company

Morise Marketing is a growing digital marketing company located in Kolhapur. The company was founded by Mr. Anil Wadikar in the year of 2017, with a mission to provide services of Search engine optimization, Social media Marketing, Website Development, Paid ads and lead generation.

The company currently has a workforce of 10 and currently serves 25 business customers. It has completed 100+ customer projects in SEO.

The projects of SEO have a duration of around 6 months to 1 year. Social Media Marketing projects are carried out on monthly basis and lead generation services are also carried out on monthly basis.

The firm is one of the few firms serving the customer needs in Western Maharashtra.

Other Information:

**Address:** 428/A, Flat No. S1., Tuljabhavani Sankul, Mangalwar Peth., near Motibag Talim, Kolhapur, Maharashtra 416012

**Phone No:** 9850051188

**Tagline:** Attract, Engage, Convert

## 2.2 Brief History of the organization:

Morise Marketing- A digital marketing company was founded by Mr. Anil Wadikar early in the year of 2017, with a tremendous experience of 18+ years in the field of sales and marketing.

Before starting Morise Marketing, Mr. Wadikar has also served as the Director of a firm 'Vishwanet Computers Pvt. Ltd', Kolhapur. The firm specialized in the field of computer training for the students. But in the year of 2010, a sudden downtrend was being borne by all the businesses involved in this Industry. Also a downtrend in conventional sources of Marketing i.e Newspaper ads, brochures, exhibitions etc. and the need and emergence of

Digital Marketing for sectors like B2B and B2C companies, laid a foundation for Morise Marketing

Their initial customers were a mix of B2B and B2C, like Dr Rukadikar's Weight Loss Clinic, Vaze Dairy, Renutron Power solutions etc.

### **Mission of Morise Marketing:**

To be a preferred Digital Marketing Company in the Western Maharashtra in the following years.

### **Objectives:**

- To get all the customers LEADS for their business through SEO and improve their business.
- To improve the pace of the execution and scale the operations of the firm.

### **Opportunities:**

- Scope is huge for the firm.
- There are very few geographical barriers in this field.
- At this stage, competition is at its least.

**Limitations faced by the firm:**

- Technically Competent people are difficult to be found in TIER 2 cities like Kolhapur.
- Apart from technical competency, other skills needed to work in this industry are analytical skills, learnability, exploring capability etc.
- People lacking above skillsets are to be seen as a limitation in the growth.



## **Chapter III**

# **THEORETICAL BACKGROUND**

### 3.1 Introduction to Search engine optimization (SEO):

Search engine optimization ( SEO):

*“The science of improving a website’s visibility across results from various search engines”*

SEO is a methodology used to gain traffic by making your website visible in search engine results via organic or paid techniques. The term organic means using natural ways to enhance website visibility without using a pay-per-click service. There are many ways to implement SEO, such as using relevant keywords, quality content, and optimal multimedia content on your web pages.

Practicing of White hat techniques is respected in the eyes of search engines. Black hat techniques would result in the banishing of the website from the web. Search engines like google, yahoo, bing etc. have their own guidelines regarding the SEO. A SEO professional/ digital marketer must adhere to all the guidelines mentioned by these search engines.

### 3.2 Benefits of doing SEO

**Catering to a massive audience:** SEO is organic, and as your site goes up the rankings, you get more traffic. Studies related to various factors of SEO (link building, user-engaging content, and so on) indicate that sites visible in the first few pages of search engine results garner more traffic than the rest.

**Permanent results to the site owners:**

When you use a pay-per-click approach, your site appears at the top of the SERP; however, the moment you stop paying for ads, the site will no longer be visible. On the other hand, SEO results are not dependent on ads, and with efficient maintenance, your site will appear at the top of the charts without having to advertise.

**Low cost of implementation:**

Advertising on web can be costly to small and medium sized businesses. But performing organic ranking procedures i.e SEO would be less than traditional marketing. In the long run, you can stabilize your site's position among the search results with minimum upkeep, resulting in a huge return on your investment for SEO implementation.

**Data and analytics:**

Data helps you gain insight into customer preferences, marketing trends, and much more. You can get detailed analytics that help you determine game-changing factors for your business. For example, Google Analytics and Google Search Console let you gather data that can help you understand key aspects and drawbacks related to your site's visibility.

**Staying ahead of the competition:**

Getting the help of analytical tools mentioned above can help you stay ahead of the competition. With accurate data and comparison of the data w.r.t the competitors can shape your strategy for the near future.

**Usability:**

SEO and user experience go hand-in-hand. The future of SEO leans toward creating an enhanced user experience. Ultimately, SEO implementation should focus not on search engines but on the user's requirements and intent

**Content marketing and branding**

Users tend to surf websites that are found among higher-ranked search results. Google encourages adherence to semantics and clean planning as opposed to underhanded techniques used by spammy websites. As traffic increases, so will the credibility of your website. Therefore, you can ensure that the branding of the products on your site is apt, leading to better sales.

### **3.3 Types of SEO:**

#### **1. On-Page SEO or On site SEO:**

On-page SEO generally focuses on efficient presentation of content to website users. Adhering to semantics and optimal web page structure are imperative for a site's success: they result in a site that is systematic and organized and that provides better readability not only for users but also for indexing by search-engine crawlers.

On-page SEO consists of factors that are in your area of control, including your code. It includes metatags and metadescriptions, headings, title tags, internal links within the site, site maps, page-load time, semantics, and ease of navigation.

#### **2. Off Page SEO or Off site SEO:**

Off-page SEO factors include things that are not dependent on the code or are not under your control. These include forum postings, social media marketing, socialbookmarking, blogs, and RSS feeds.

Off-page SEO is essential in the long term as you create a community for your content. Social networking is a key factor for creating a positive online reputation, and off-page SEO lends significant trust and credibility if you play by the rules.



**Chapter IV**  
**SEO PROCESS, DATA ANALYSIS &  
INTERPRETATION**

#### **4.1 Introduction to the SEO Process:**

Search Engine Optimization depends upon following three stages of optimization.

##### **1. Crawling:**

At this stage crawler/Bot (of Google bot (Robot which crawls the website for a given search query).) crawls over the web for the results, when the user enters a query on the search engine.

When the keywords entered into the query keywords on the webpage matches, Google shows it into the SERPS (search engine result pages).

To show bring the crawler over the webpage, the content needs to be SEO-friendly & optimized for search engines.

##### **2. Indexing:**

After crawling, the second stage comes into play is Indexing. At this stage the algorithms of Google starts to show Web pages in SERPS after it has been Crawled.

When the data on website is stored by the search engines, it is known as Indexed. Until the webpage or site is indexed, it cannot come onto ranking.

To check whether the site is Indexed or not, just type the following on the browser: Site:www.domain.com (all urls associated with your site and the ones indexed will be shown in the SERPS)

##### **3. Ranking:**

The webpage/ website must Rank between 1-10 on the SERPS. The reason is that an average user do not browse beyond 10 URLs for his search query.

There for it is Utmost Important to rank between 1-10 on the SERPS for a given keyword.

## **4.2 Actual process:**

The Process is divided into further 3 Sub processes.

### **1. Pre website Launch:**

Activities like Creating SEO-friendly content, On Page Optimization, developing the code and launching of website fall under this category.

### **2. Post website launch:**

Activities like website audit, off-page optimization, social media optimization are undertaken here.

Post website activities are done for 5-6 months during the contract, until all the keywords are ranking better on SERPs. If the results are achieved during these 6 months and if customer is satisfied, then the SEO contract is concluded and an annual maintenance contract is drawn, where these position maintained throughout the year.

### **3. Analysis and Reporting:**

In this stage, analysis is done whether all activities conducted earlier are resulting fruitfully or not. Activities like monthly rank reports, and yearly SEO reports are prepared and reported to the website owners.

### 4.3 Pre website launch process:

#### Creating a SEO-friendly content:

An SEO friendly content is all about ease for search engines to understand the content on a webpage. During this process, keywords targeted by the client are analyzed in various online tools. When proper keywords are identified, proper content is written/rewritten with the insights from the customer.

This process further contains two sub process:

#### i. **Competitor Analysis:**

In this process competitor's website is analyzed for their content presentation and use of keywords in their content. The keywords are further analyzed with the potential keywords required to the customer.

Titles, headings, meta-descriptions & meta-keywords are screened during this process. (Technical words like titles, headings and meta-descriptions, meta-keywords are explained further.)

List of competitors is managed manually in an excel sheet and their website and social media handles are monitored constantly as a benchmark for the customers.

All the keywords are taken into further analysis.

#### ii. **Keyword Analysis:**

This is the stage where the potential keywords to be ranked are analysed through various online tools. Google Keyword Planner is the tool used by the team here.

The analysis is done to find 3 things.

#### • **Search Volume:**

This metric tells us how many times the keyword is searched during a period. No. of visitors for the given keyword are tracked in this metric. It



is important to know the traffic coming to keyword. It helps to determine viability of the keyword before using it in the content.

Below is a table given containing keywords chosen for the analysis of a customer (Renutron Power Solutions). Google Keyword Planner tool was used for this analysis.

**TABLE 4.3.2 Keyword Analysis Snapshot**

<b>Keyword</b>	<b>Search Volume</b>	<b>Competition</b>
lift inverter manufacturers in india	50	Low
online ups manufacturers in india	50	Medium
industrial online ups manufacturers in india	50	Low
best rooftop solar panels in india	500	Medium
online ups manufacturers in delhi	50	Medium
on grid solar system in haryana	50	Low
best rooftop solar system in india	50	Medium
online ups manufacturing companies in india	50	Low

online ups manufacturers in pune	500	Low
solar panel on house roof in india	1000	medium

**Interpretation:**

Above is a snap of keywords to get an idea, how actual keywords would be chosen. A total of 60 potential keywords were analyzed during this process. Out of these, 32 High search volume and low & medium competition keywords were chosen for further content creation.

These keywords would be optimized during On-Page Optimization.

### On Page Optimization:

On page optimization is the process of optimizing various front end and back end components of website to increase the ranking. Keywords chosen after the analysis are used for creating Headline Tags, Title tags and meta-descriptions.

- **Headline Tags:** Titles on the website can be seen here. Keywords associated with the page is injected here, so that search engines can crawl and fetch the data on the website.  
All the titles are inserted into H1, H2 and H3 tags. These can only be viewed once the user opens a webpage/site.
- **Title Tags:** Title tags contains titles that will be visible on the SERPs, once a user searches for the query. These can only be seen in the results page and is fetched from the content of the website.
- **Meta-Descriptions:** These are short summarizations from the content on the website. These can be viewed either in the source code or in the SERPs under the title tags. They are created from the keywords chosen from analysis. It must be between 150-160 words.
- **Internal Linking:**  
Internal linking are hyperlinked text that links the webpages on the website with each other. This is important step, because it helps search engines to index the content faster and improving its ranking.
- **Keyword Density:**  
A keyword density of 3% is maintained in the content. It is a necessary condition by the guidelines issued by Google.Inc.  
**Keyword Density:** total no. of keywords/no of words in the content

After all this process the content and above details are out sourced to the web developer. The technical part is not explained here due to the process covered by the web developer.



Once the site is prepared and all changes are done, the site is launched over the web, and from here the 6 months of monitoring is started and post website process is initiated.

#### 4.4 Post website launch process:

##### Website Audit:

After the launch of website, a website audit is conducted. A website audit is conducted to check few technical & non-technical aspects of website. It is not a recurring process and is done only when a new site is launched or when changes are done in the website.

Following aspects are checked throughout this activity.

- i. **Page load time:** Here the loading time of a website is checked with the help of online tools. It is very important to check the load time as it is a critical aspect from SEO perspective. The site must load within 3-4 seconds. If it takes more time to load, changes in the content has to be made.
- ii. **Backlinks:** Backlinks are those external links (websites) pointing out at our website. When any website is pointing out our website, it is good indication of Authority on the web, according to search engine guidelines. Initial count is low, but once you start off page activities, social media optimization, it starts to improve.
- iii. **Sitemaps:** Sitemaps is a .xml file containing all necessary URLs of the website created by the developer. Absence of this file will not let the search engines to crawl & index our site. Their presence is absolutely necessary.
- iv. **Domain Authority:** Domain Authority or DA is a metric that indicates the authority of a website on the web. Search engines rank the website from 1 – 100 in this. In the eyes of search engines, it is very important to maintain a rank of 50+. Initially this is also lower, but starts to increase with time.
- v. **Link checking:** All the internal links on the website are properly working or not are checked in this. Whether the URLs are properly linked, shows correct page or not is necessary to check before doing off page activities.



- vi. **Keyword Density Checking:** Whether the desired depth of keywords are injected or not is checked in this one. If it is not properly injected, changes have to be made in the website.
- vii. **Plagiarism Checking:** Whether the content on the website is plagiarized or not is checked throughout the process. Plagiarism is also checked during content creation, but once the website is launched it is rechecked for the assurance of being unique.  
The content over the website should be at least 80% Unique.
- viii. **Call-to-Action (CTA):** CTA is checked to know whether the E-mails, Phone numbers, Enquiry form, Social media links are properly working or not. These are necessary to check to ensure that the customer gets leads through this medium. If they are not checked, customers may lose a potential lead.

#### Off Page Optimization:

- i. **Social Bookmarking & Classified ads:** This method is used to build backlinks for the website. Backlinks serve as an important metric to show website authority. Website links are posted on various other relevant sites with content to earn backlinks. Quantity & Quality backlinks are generated throughout this process. It is a recurring process and has to be done till the website improves its ranks. Classified ads are also meant for the same purpose. The URLs of the sites on which we post have to be maintained to check whether we earn any backlinks or not.
- ii. **Forum Submission:** In this method, Forum sites are identified where questions of the users related to the particular field are answered, after taking the correct insights from the clients. Links of the website are given to earn some backlinks.
- iii. **Social media Optimization:** Posts are created and shared across various social media handles like Facebook, LinkedIn, Youtube and Instagram. These are highly trusted sites and help in earning backlinks.

- iv. **URLs Pinging:** When the site is launched, its URLs are submitted to some Pinging Sites and Google search console, which helps to index the the site faster and help rank better in SERPs. All social bookmarking, classified ads links are also submitted on these sites. These off-page activities are often recurring and continue even after the contract is concluded to maintain the position earned in the SERPs.

#### **4.5 Analysis and Reporting:**

This the final stage for making the SEO project successful. It is here when we come to know whether our all activities performed in the earlier two stages are resulting fruitfully or not! The reports are displayed with reference of the customer, Renutron Power solutions, Kolhapur.

Monthly Rank Reports, and Yearly SEO reports are prepared with the help of Google Analytics and MS-Excel.

##### **4.5.1 Rank Report:**

This report is prepared on a monthly basis to check the average rank of targeted keywords. The process to find the rank is a manual one, and is done with the help of search engines. Following table shows the average rank of all the keywords of a customer (Renutron Power solutions).

Below is snapshot of Rank report used for for recording the ranks of particular keyword.

TABLE 4.5.2 (Snapshot from Monthly Rank Reports)

Sr. No.	Keyword	Rank
1	lift ups in mumbai	1
2	lift ups in pune	1
3	lift backup in pune	1
4	lift ups in Bangalore	1
5	lift backup in Bangalore	1
6	lift ups in Kolhapur	1
7	lift backup in india	1
8	lift ups in india	1
9	lift backup in Kolhapur	1
10	lift ups in Nashik	1
11	solar rooftop system in Kolhapur	1
12	lift erd manufacturers in NCR	1
13	lift erd manufacturers in Gurugram	1
14	lift backup in mumbai	2
15	lift backup in Nashik	2
16	lift erd manufacturers in Haryana	2
17	lift inverter in india	3
18	lift inverter in mumbai	3
19	on grid solar power system in pune	3
20	on grid solar power system in Kolhapur	3
21	lift erd manufacturers in delhi	3
22	lift inverter in pune	3
23	lift inverter in Bangalore	3
24	lift inverter in Nashik	4



25	lift inverter in Kolhapur	4
26	on grid solar power system in Bangalore	4
27	Tubular Battery Manufacturer in India	5
28	solar rooftop system in pune	6
29	on grid solar power system in india	6
30	online ups manufacturers in india	17
31	industrial online ups manufacturers in india	24
32	solar rooftop system in Bangalore	24
		4

### Interpretation:

Keywords from 1 to 26 are ranking better in SERPS. Keywords from 26-32 need to improve their ranking. Average Rank is also in Acceptable condition. (Average rank must always be improving with time. If not then, SEO efforts are to be tweaked a bit)

### 4.5.3 SEO Yearly Reports:

This report is submitted to customer every quarterly or yearly months. Google analytics is the tool used for improve decision making.

- i. **Yearly user data:** This data is only made available to the customer after 1 Year, by Google analytics.



**Interpretation:**

The wave chart shows us the months of June 2021, showed a sudden spike in visitor's data. And the month of October 2021 was seen the lowest. A total of 10,756 users were had visited during this period. Average time spent by a user is 2 minutes on the website. If the user is spending atleast 2 minutes, then the content on the site is performing better.

ii. **Country Wise Data:**

Visitors from various countries are identified in this.

**Table 4.5.3.ii (Snapshot from Annual Seo Reports)**

Country	Users	New Users	Sessions
India	8457	8412	11484
USA	842	539	848
China	327	323	354
UK	236	236	237
Other	372	365	417
<b>Total</b>	<b>10756</b>	<b>10680</b>	<b>13907</b>

**Interpretation:**

From above table we can come to know that out of 10,756 visitors, 8457 visitors were from India and 2<sup>nd</sup> most from United States of America. This tells us that, people are searching for them not only in India, but also in other countries.

**iii. City Wise Data:**

Whether the traffic is coming from our targeted cities or not is thoroughly checked in this tables. Targeted cities for Remutron are Pune, Bengaluru, Delhi and other metro cities in Maharashtra.

**Table 4.5.3.iii (Snapshot from Annual SEO reports)**

City	Users	New Users	Session
Pune	1995	1916	2924
Bengaluru	981	956	1216
Mumbai	866	822	1061
Delhi	441	417	586

**Interpretation:**

We can observe that there are 1995 visitors from Pune (Targeted City), 981 (Bengaluru) and 441 from Delhi. These means that we are receiving traffic from targeted areas.

**Iv. Channels Data:**

This data shows that through which sources, are users visiting to the website.

Table 4.5.3.iv (Percentage wise data)

Channels	Percentage wise Users
Organic	70%
Direct	28.5%
Referral	1%
Social	0.5%

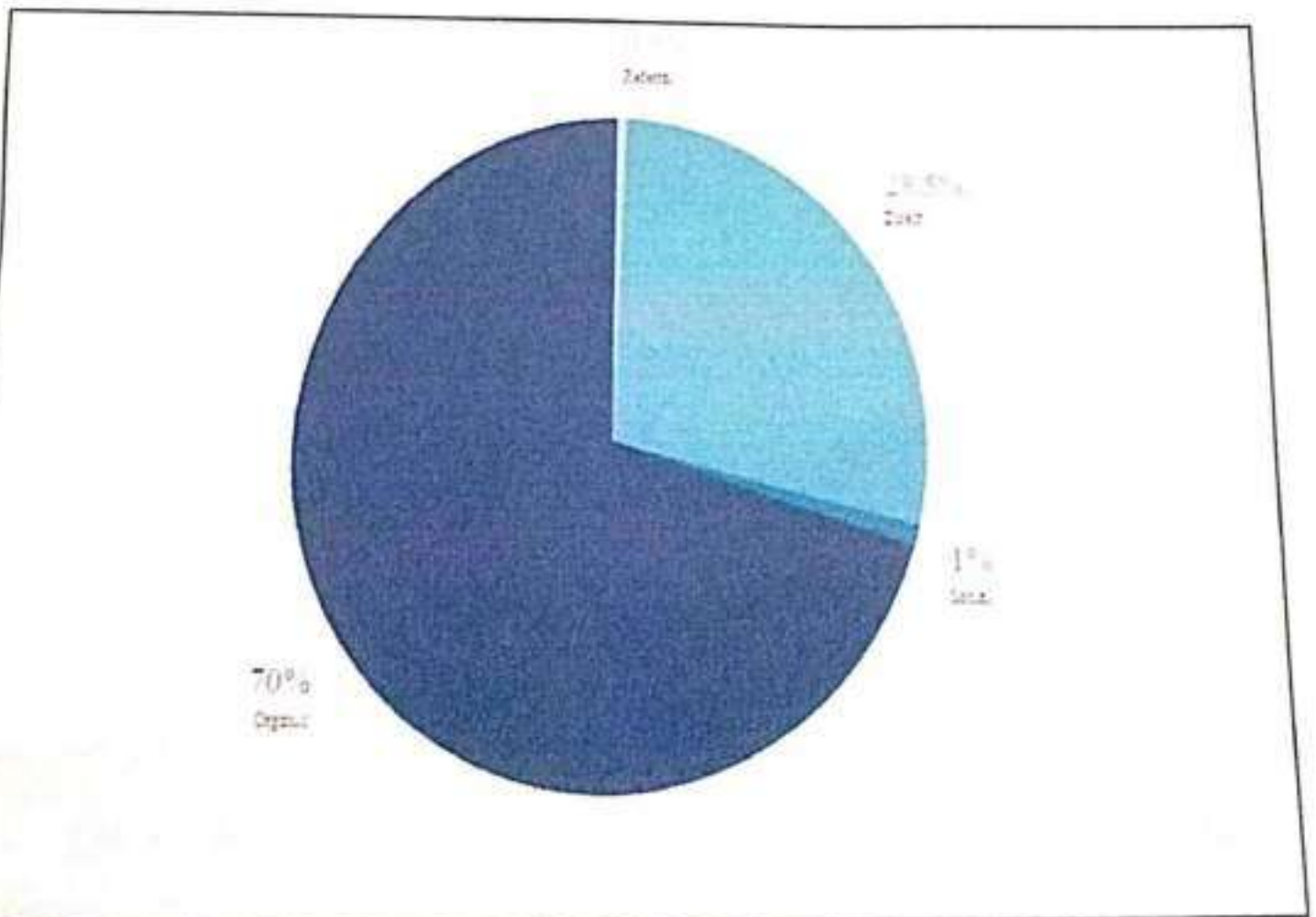
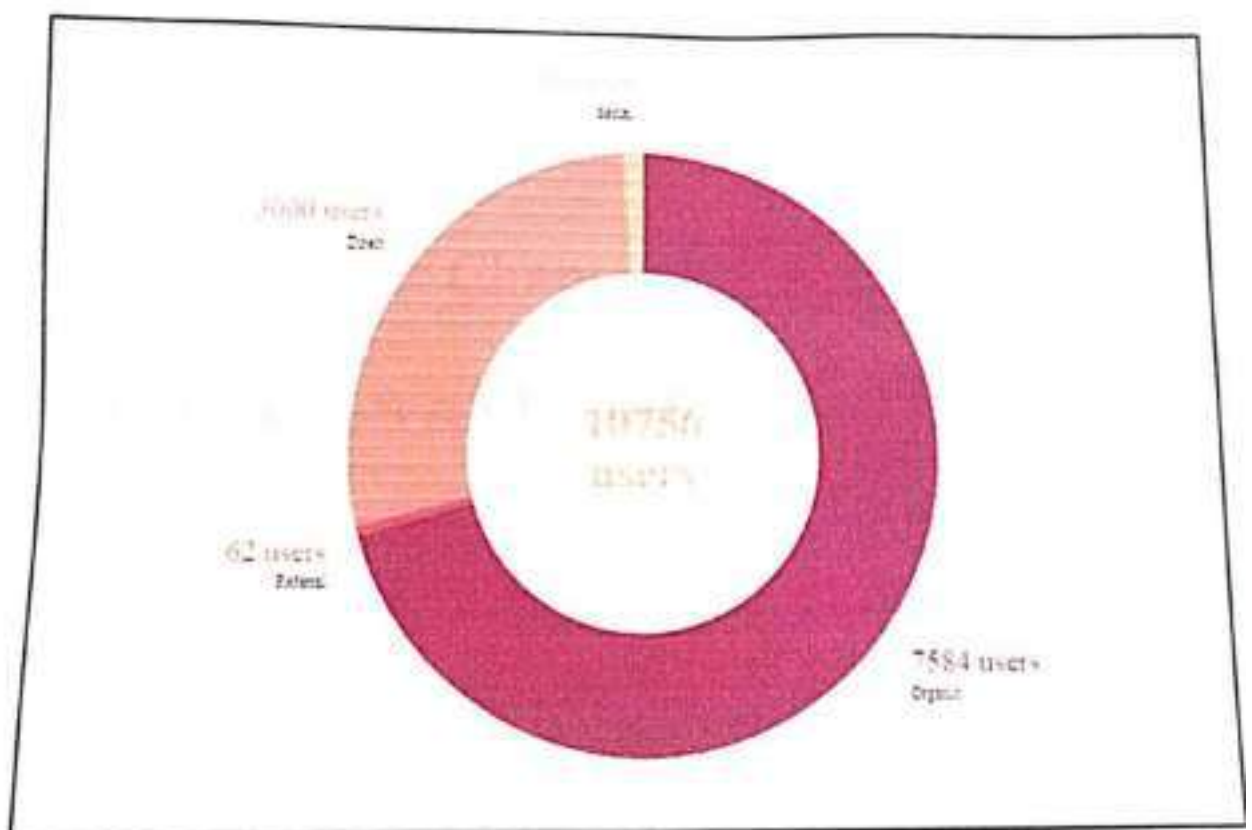


Table 4.5.3.v (Number of Users per channel)

Channels	User Numbers
Organic	7584
Direct	3000
Referral	62
Social	110



#### Interpretation for Table 4.5.3.iv & 4.5.3.v

The pie charts clearly indicate over 70% (7584) web users are reached organically the website. 28.5% (3000) users are direct i.e they have searched directly for the website. This chart indicates that the SEO efforts are showing fruitful results for the customers.



## Chapter V

# FINDINGS AND OBSERVATIONS

## 5.1 Finding and Observations.

- From the theoretical explanation & observation of the SEO process, it can be concluded that the pre website launch process at least takes 1 – 2 months.
- After website launch, it takes 2-3 months to newly made website to index & another 3 months to start ranking.
- To track the progress of the website various online tools are used to prepare reports.
- The table in 4.3.2 part helps to select the potential keywords that are to be targeted.
- The Table in 4.5.2 determines the off-page fruitfulness of the Off Page Activities, by determining the Average rank.
- The tables in 4.5.3 (i,ii,iii,iv) part help in better understanding & decision making to the customer.
- From the interview & experience gain, it has been concluded that an aspirant who needs to work in a digital marketing field must have skills like technical knowledge, learnability, creativity, exploring capability and a fast learner.

## CHAPTER VI

### THE CONCLUSION

From the above project carried out for 5 months of internship brings the researcher to the following conclusions:

- Search Engine Optimization process is a long term strategy for any website. It is not a one-time process or temporary one.
- The hypothesis determined that a “SEO process takes 6 months to show results” at the start of the project has received an affirmative response from the study.
- As the process is one digitalized one, manual tracking of progress is not possible. Various online tools like Google keyword planner, search console, Google Analytics & Ahrefs are used to determine the success of a project.
- Various Skills like technical knowledge, learnability, marketing knowledge, creativity, fast learner are required for an aspirant to work in a digital marketing firm.
- It is one of the most needed strategy for any website, which wants leads through online methodology.



---

## CHAPTER VII

### REFERENCES AND BIBLIOGRAPHY

Following resources were used for secondary data collection.

- Book: Introducing SEO: Your quick-start guide to effective SEO practices by Aravind Shenoy & Anirudh Prabhu.
- Keyword Analysis Report of Renutron Power Solutions.
- Monthly Rank Report of Renutron Power Solutions.
- Annual SEO reports of Renutron Power Solutions.

## APPENDIX

### Questionnaire for the interview of CEO

Q1. What Circumstances made you enter in the field of Digital Marketing?  
And was this your first step in the world of Marketing?

Q2. What competencies were helpful for you at the start of this company?

Q3. What competencies are needed for an aspirant to enter into the field of digital marketing?

Q4. Other than technical knowledge, what other skills are necessary for doing SEO?

Q5. What kind of services does your firm provide? What is their nature?

Q6. How did Covid-19 affect the business? What are the challenges faced by your firm currently?

Q7. What are the benefits for website owners/businesses of doing SEO?

Q8. How is current scenario for the firm?

Q9. How are you looking towards the future of the firm?

Q10. What are your suggestions to students, who want to work in this Industry?

### **Questionnaire to SEO head**

- Q1. What is search Engine Optimization (SEO) & why is it necessary for website owners?**
- Q2. What is On-Page & Off- Page SEO?**
- Q3. What is the very first step for starting an SEO project?**
- Q4. How much time does it take to start the process of SEO?**
- Q5. After how much time can we the results on the web?**
- Q6. Why it is necessary to do Off- page SEO after the page gets to the ranking?**
- Q6. From Which Channels are users desired to the website?**



Vivekanand College, Kolhapur (Autonomous)

Department of BBA

Project Work Progress Report (2020-21)

Name of the Student & Mob. No. Pratiksha Patil - 952252963

Title of the Project : A STUDY ON THE EFFECT OF SEC ON FINANCIAL MARKETS

Name of the Guide : M.S. Mujumdar Sir

Sr. No.	Particulars: <u>Discussing scope and objectives of Project.</u>
(a) (b)	Guide's Suggestions- <u>Understanding the objectives, achieving some of them. Research methodology to be selected for collecting information.</u>
Guide's Sign-	Student's Sign- <u>[Signature]</u> Date- <u>01/04/2022</u>
Sr. No.	Particulars: <u>Showing 3<sup>rd</sup> &amp; 4<sup>th</sup> chapter</u>
	Guide's Suggestions- <u>Some alterations were made in the 2<sup>nd</sup> chapter.</u>
Guide's Sign-	Student's Sign- <u>[Signature]</u> Date- <u>05/04/2022</u>
Sr. No.	Particulars: <u>3<sup>rd</sup> chapter was shown. (1st &amp; 2<sup>nd</sup> chapter with changes)</u>
	Guide's Suggestions- <u>Yet to be finalized, no insights received.</u>
Guide's Sign-	Student's Sign- <u>[Signature]</u> Date- <u>03/05/2022</u>
Sr. No.	Particulars: <u>Finalizing all the chapters of Project.</u>
4	Guide's Suggestions- <u>Correction &amp; spelling of all project check required. all necessary changes discussed.</u>
Guide's Sign-	Student's Sign- <u>[Signature]</u> Date- <u>18/05/2022</u>



"Education for Knowledge, Science, and Culture"  
- Shikshanmaharshi Dr. Bapuji Salunkhe  
**Shri Swami Vivekanand Shikshan Sanstha's**  
**Vivekanand College, Kolhapur**  
**(Autonomous)**



**B.Sc. (Computer Science Entire) Student Projects 2021-22**

Sr. No.	Name of the Student	Name of the project
1	Chougale Akanksha Ravindra	Play School Management System
2	Khapre Supriya Bajirao	
3	Patil Niranjan Nitin	Dance Academy Admission System
4	Shindre Rahul Parshuram	
5	Patil Siddhi Subhash	Wholesale Medical Distribution Management System
6	Vasudev Riddhi Sunil	
7	Dandage Suhas Sambhaji	Movie Theater Ticket Management
8	Mane Malhar Jayawant	
9	Koli Tushar Rajaram	Automobile Spare Parts Management System
10	Mane Pavan Bhimrao	
11	Walke Atharva Atul	The Liabrary Management System
12	Patil Priyanka Sanjay	
13	Mendgule Vaishnavi Sandeep	Sport Shop Management System
14		
15	Patil Ajay Maruti	Sai Service and Repair Centre
16	Patil Pranav Prakash	
17	Ardak Shivsagar Siddheshwar	Tailoring Shop Management
18	Chougule Pratiksha Sunil	
19	Bagave Rupesh Jaywant	Cashew Factory Management
20	Jadhav Asavari Ashok	
21	Bhandigare Rudra Raviraj	Quality Engineers Billing System
22	Magar Swapnil Pandurang	
23	Shete Tanvi Ravikant	Gym Management System
24	Tawar Yash Krushnath	
25	Chavan Rupesh Sunil	Accounting System Software



26	Chopade James Pravin	
27	Jadhav Sakshi Manik	Blood Bank Management System
28	Sutar Snehalata Baliram	
29	Jathar Suraj Balasaheb	
30	Nare Prathamesh Sadashiv	Shelke Jewellery Shop
31	Patil Namrata Appaso	Database Management For FD in KDCC Bank
32	Patil Samiksha Sanjay	
33	Patil Vaishnavi Ranjeet	Bank of India Management System
34	Patil Varsha Hanmant	
35	Babar Santosh Tukaram	T and S Fertilizers
36	Powar Tushar Ramrao	
37	Ghorpade Sanjana Sunil	Gram Panchayat Management System
38	Patil Pratiksha Dadaso	
39	Patil Mrunalini Shivaji	Payroll Management System
40	Pawar Anjali Anil	
41	Chougale Kshitij Ravindra	Canteen Management System(Army)
42	Patil Raturaj Shrikant	
43	Mane Shruti Sudhir	Patanjali Stock and Billing Management System
44	Patil Sonali Janardan	
45	Sawant Divya Sanjay	Dairy Management System
46	Shanbhag Nagashree Vasudev	
47	Vrushali Suryavanshi	Bachat gat mgt. sys.
48	Manasi Patil	
49	Bendkhale Vaishnavi Umesh	Hotel Management System (Lodging and boarding)
50	Bhendwade Misbah Shakeelahamad	
51	Bhosale Anushka Tanaji	S. B. Engineers Database Management System
52	Bhosale Rutuja Sadik	
53	Dangar Pradip Kondiram	Menon Bearing Order and Sales Management System
54	Gaikwad Sangram Prakash	
55	Godbole Pradyumna Nitin	Chemical Factory Management
56	Patil Rupesh Rajesh	
57	Lade Sonali Arvind	Temple Employee Management
58	Mitake Vaishnavi Chandrakant	
59	Adav Satyajit Sunil	Hostel Management System
60	Lidhade Avdhut Ramesh	



Mrs. Pallavi Desai

Coordinator, B.Sc. (Computer Science Entire)  
**Head**

Dept. of B.Sc. Comp. Sci. (Entire)  
Vivakanand College, Kolhapur.




# Vivekanand College, Kolhapur (Autonomous)

Department of Computer Science

B.Sc. III (Projects) 2021-22

Group No.	Name of the Student	Project Title
1	Samadhan Anil Arade	Campus Recruitment
	Prajakta Pandurang Sankpal	
2	Ketan Krishnat Chougale	Automated attendance system using face detection
	Aadesh Satish Patil	
3	Vaishnavi Suresh Sutar	Commercial Website building for Tiles
	Akshata Suhas Mahadik	
4	Karishma Kumari Mali	Car Servicing
	Sayali Vijay Jadhav	
5	Kajal Lakhmichand Katiyar	Cardiac Disease Detection
	Preeti Manohar Katiyar	
6	Vaishnavi Ravaso Jadhav	Online Quiz Generator
	Tasmiya Kasim Jamadar	
7	Ananya Balwant Kadwale	Online Admission System
	Pankaj Vishnu Khandare	
8	Vishwajeet Ganesh Sutar	E-commerce
9	Pranjal Prakash Shintre	Defence Career Academy
	Shreya Rahul Korde	
10	Saraswati Ajit Powar	Pet Shop Management System
	Tejashree Sarang Sagaonkar	
11	Vaishnavi Rajendra Khurandale	Jijah Crystal Website
	Amruta Shahaji Dabade	
12	Shritej Subhash Patil	Health Hub
	Rajvardhan Satappa Magdum	
13	Kirti Pravin Shinde	Food City
	Nikita Shubash Patil	
14	Sunil Suresh Patil	The Hostel
	Sanket Sarjerao Patil	
15	Sammed Rajgonda Patil	Home Appliances
	Prashant Vishal Powar	
16	Bhargavi Ramling Kugaji	Design and Development of E-Commerce website for Dry Fruits
	Snehal Sanjay Patil	
17	Ashrafalli Akhtarhusen Mulla	Online Encryption and Decryption System
	Siddharth Subhash Patil	

18	Harshada Sanjay Sutar	Cineflicks Movie Ticket Booking
	Snehal Sudhakar Nirmale	
19	Poonam Sanjay Giri	Dairy Management
	Sakshi Pramod Patil	
20	Rohan Ashok Patil	Online Fruit Order System
	Sujit Sunil Patil	
21	Abhishek Ajit Patil	Online Mentoring System
	Pratik Pradip Chavan	
22	Santosh Subhash Patil	Siddhagiri Math
	Ashutosh Dhanaji Shivane	
23	Aishwarya Sunil Chavan	Online Shopping System
	Rutuja Amar Dinde	
25	Vaishnavi Pravin Muthane	
26	Garadi Sania Harun	Predict of Diabetes

  
(Dr. V. B. Waghmare)

Dept. of Computer Science  
Jyekanand College, Kolhapur

Online Admission System

"Dissemination of Education for Knowledge, Science and Culture"  
-ShikshanmaharashiDr.BapujiSalunkhe

Shri Swami Vivekanand Shikshan Sanstha's  
**Vivekanand College, Kolhapur (Autonomous)**

A project report on  
**"Online Admission System"**



Submitted by  
Mr. Ananya Balwant Kadwale  
Mr. Pankaj Vishnu Khandare  
Class: B.Sc.-III (Computer Science)

Under Guidance of  
Dr. V. B. Waghmare

Submitted to  
**Vivekanand College, Kolhapur**

2021-2022




Shri Swami Vivekanand Shikshan Sanstha's  
**Vivekanand College, Kolhapur**

# Certificate



This is to certify that, **Mr. Ananya Balwant Kadwale** and **Mr. Pankaj Vishnu Khandare** has satisfactorily carried out project work entitled "**Online Admission System**" for Vivekanand College, Kolhapur (Autonomous) as partial fulfilment of the course B.Sc. in Computer Science for academic year 2021-2022.

Date : 3/11/2022  
Place : Kolhapur

  
Head,  
Dept. of Computer Science  
Head,  
Dept. of Computer Science  
Vivekanand College, Kolhapur

Examiner

17   
10/11/2022

  
10/11/22



Shri Swami Vivekanand Shikshan Sanstha's  
**Vivekanand College, Kolhapur**

A project report on  
**"Online Admission System"**

## **ACKNOWLEDGEMENT**

We have great pleasure to express our deep gratitude to the Dr. Mujawar Sir and Mrs. R. Y. Patil Madam for valuable guidance and useful suggestion through the project.

All guides have always a source of inspiration for us. It is grateful guidance and constant encouragement which held successful completion of project.

In the last but not least we thank our faculties, entire Computer Science Department and all others who have directly or indirectly helped us in completion of this project.

*Balwale*

Mr. Ananya Balwant Kadwale

*PV Khandare*

Mr. Pankaj Vishnu Khandare

Shri Swami Vivekanand Shikshan Sanstha's  
**Vivekanand College, Kolhapur**

A project report on  
**"Online Admission System"**

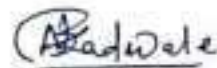
## **DECLARATION**

To,  
The Principal,  
Vivekanand College,  
Kolhapur.

We undersigned declare that the project Report on "**Online Admission System**" is developed. The project work is based on the information collected by us.

We understand that any such copying is liable to be punished in a way the college authorities deem it.

Date :  
Place :



Mr. Ananya Balwant Kadwale



Mr. Pankaj Vishnu Khandare

Shri Swami Vivekanand Shikshan Sanstha's  
**Vivekanand College, Kolhapur**

A project report on  
**"Online Admission System"**

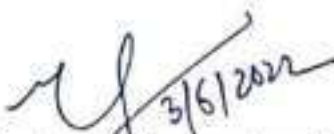
## **GUIDE CERTIFICATE**

This is certify that, ↓

Mr. Ananya Balwant Kadwale and Mr.Pankaj Vishnu Khandare has satisfactorily carried out our project work entitled "Online Admission System" for Vivekanand College, Kolhapur as partial fulfilment of course. B.Sc. Computer Science for academic year 2021-2022. To the best of my knowledge and belief the project presented by them is their original work.

Date :

Place :

  
3/6/2022  
Dept. of Computer Science  
( Project Guide )

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Sr No.	Content	Page No.
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7.	System Diagrams : <ul style="list-style-type: none"><li>• Context Level DFD</li><li>• Data Flow Diagram (First Level)</li><li>• ERD</li></ul>	6 - 8
8.	System Design : <ul style="list-style-type: none"><li>• Database Design</li></ul>	8 - 10
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# INTRODUCTION

It is very tedious procedure to take the admission in any college and very time consuming procedure.

The traditional way of taking admission is to visit to the college and collect the admission form and by attaching lots of documents need to submit it at college counter. Also the college will have to collect the documents and after scrutinizing all the documents the college management will display a merit list. This is very difficult and not so easy task. The increasing number of students seeking admission in the colleges are causing tremendous pressure on the administrative body to manage & arrange the admission process & merit list generation manually. It is difficult to conduct the process in timely manner. Hence, we decide to develop such a system which will help to all concerns like Student, Teachers and all stakeholders.

We can make this process is online to reduce time. The online admission system ensures accurate & very fast computerized information maintains backup is also very easy using "**Online Admission System**". This is also easy way for students. Students can fill application form at their convenient time in comfortable environment even by sitting at their home.

# OBJECTIVES

There are two types of accessing modes:

1. Administrator
  2. Student
- Online admission Form will be generated.
  - Merit lists will be automatically displayed by an administrator.
  - The administrator handles whole system.
  - For admission student can fill only the form.
  - The filled form is verified by administrator and then he will generate the merit list.

## EXISTING SYSTEM

In existing system, students can take the form from college. They can fill the form. After filling the form with required documents they can submit the form in the college. Admission committee checkout all information manually and then display merit list as per college criteria. For seeing the merit list they can come in college.

## NEED FOR NEW SYSTEM

In order to solve the disadvantages of existing system a new system is proposed to be developed. It is going to be developed in Python Flask and MySQL.

Following are the advantages of new system.

1. This is very useful application for students and college admission committee.
2. The system avoid hectic submission process.
3. The system reduce paperwork and man power.
4. Our system is highly secured and flexible. It contents data consistency.
5. Only one person can handle this system.

## PROPOSED SYSTEM

In proposed system, students can apply admission by simply filling the application form containing registration page, students personal information, academic information and upload documents etc.

- After that the admin can see the backup. He can view the online admission form of all students.
- When admin views all students admission form then system automatically generate the merit list.
- Merit list will be displayed on Online Admission System's student portal.



# SYSTEM REQUIREMENTS

Software requirements :-

- Windows OS
- Python Flask
- HTML , CSS & JavaScript
- MySQL

**CONTEXT LEVEL DFD –**

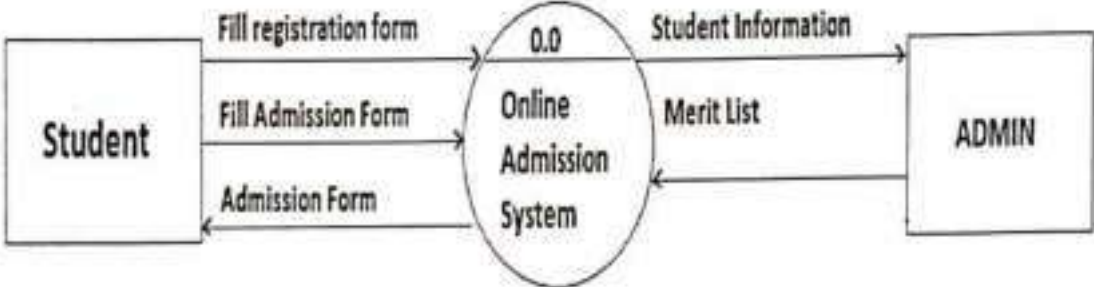


Fig. 0 Level DFD

### DATA FLOW DIAGRAM (First Level) :

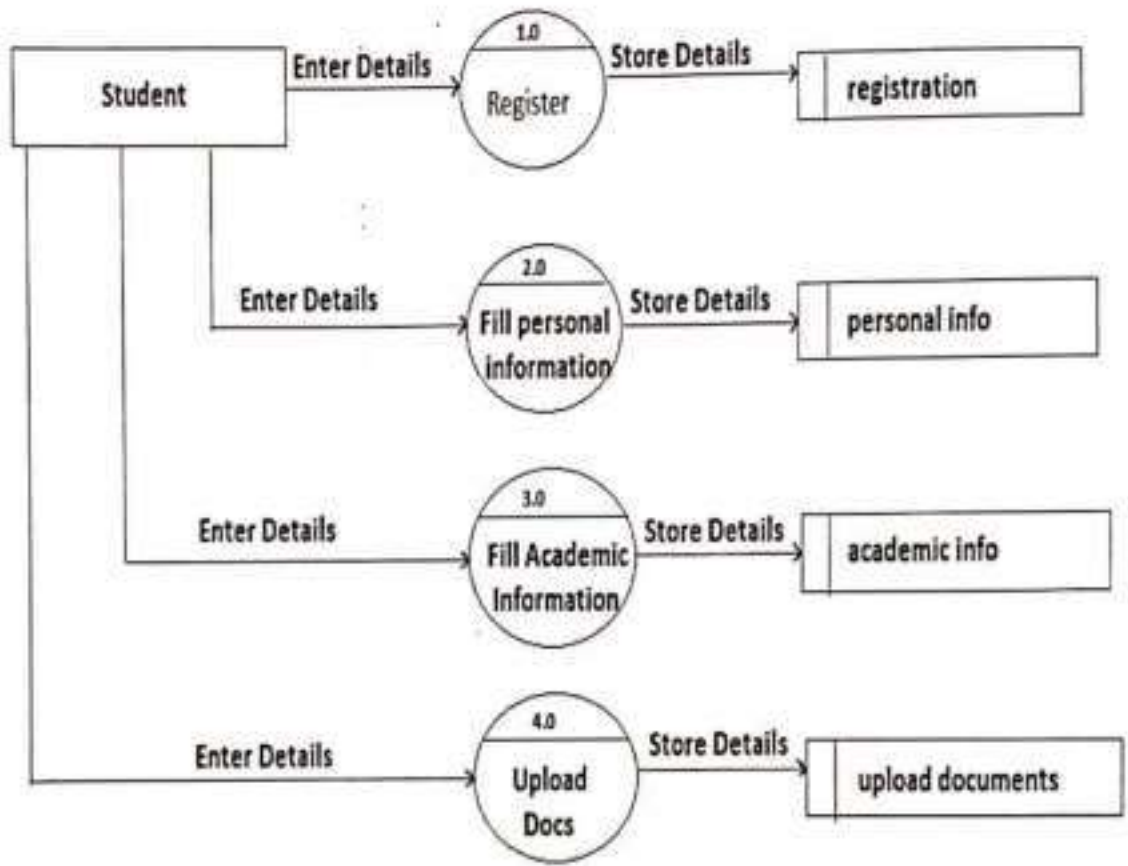


Fig. First Level DFD

# ERD-

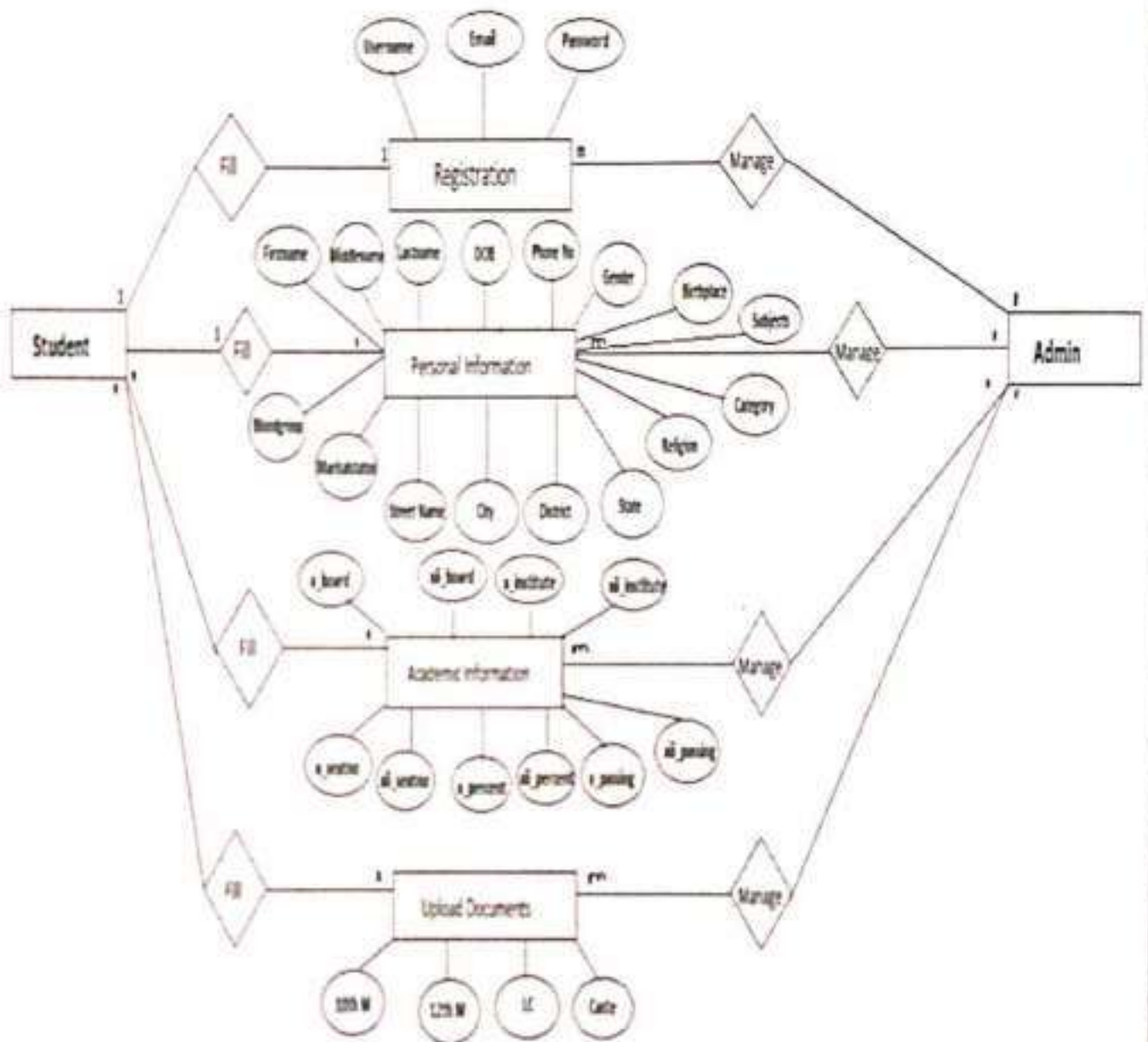


Fig. ERD



# SYSTEM DESIGN

Database Name : admission

Tables :-

1. registration

Field Name	Datatype	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	Auto_increment
username	varchar(50)	NO		NULL	
password	varchar(50)	NO		NULL	
email	varchar(50)	NO		NULL	

2. Personal Information :

Field Name	Datatype	Null	Key	Default	Extra
Firstname	varchar(30)	NO		NULL	
Middlename	varchar(30)	NO		NULL	
Lastname	varchar(30)	NO		NULL	
Dob	date	NO		NULL	
Phone	Bigint(10)	NO		NULL	
Gender	Varchar(10)	NO		NULL	
Birthplace	Varchar(10)	NO		NULL	
Bloodgroup	Varchar(10)	NO		NULL	
Maritalstatus	Varchar(15)	NO		NULL	
Street	Varchar(30)	NO		NULL	
City	Varchar(30)	NO		NULL	
District	Varchar(30)	NO		NULL	
State	Varchar(30)	NO		NULL	
Religion	Varchar(15)	NO		NULL	
Category	Varchar(15)	NO		NULL	
Id	Int(20)	NO		NULL	
Subjects	Varchar(30)	NO		NULL	

### 3. Academic Information :

Field Name	Datatype	Null	Key	Default	Extra
x_board	vvarchar(40)	NO		NULL	
xii_board	vvarchar(40)	NO		NULL	
x_institute	vvarchar(40)	NO		NULL	
xii_institute	vvarchar(40)	NO		NULL	
x_seatno	vvarchar(15)	NO		NULL	
xii_seatno	vvarchar(15)	NO		NULL	
x_percentage	vvarchar(10)	NO		NULL	
xii_percentage	vvarchar(10)	NO		NULL	
x_passingyr	vvarchar(10)	NO		NULL	
xii_passingyr	vvarchar(10)	NO		NULL	
Id	int(10)	NO		NULL	

### 4. Upload Documents :

Field Name	Datatype	Null	Key	Default	Extra
10 <sup>th</sup>	vvarchar(255)	NO		NULL	
12 <sup>th</sup>	vvarchar(255)	NO		NULL	
lc	vvarchar(255)	NO		NULL	
caste	vvarchar(255)	NO		NULL	
id	int(20)	NO		NULL	

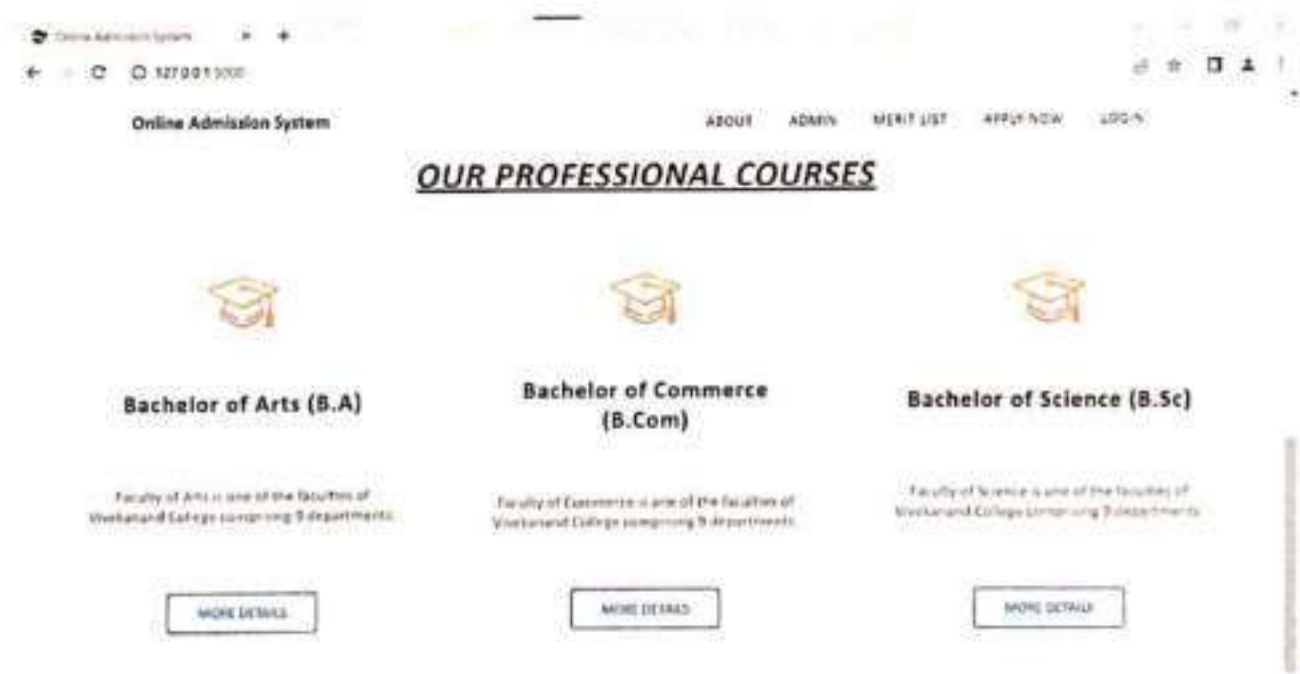
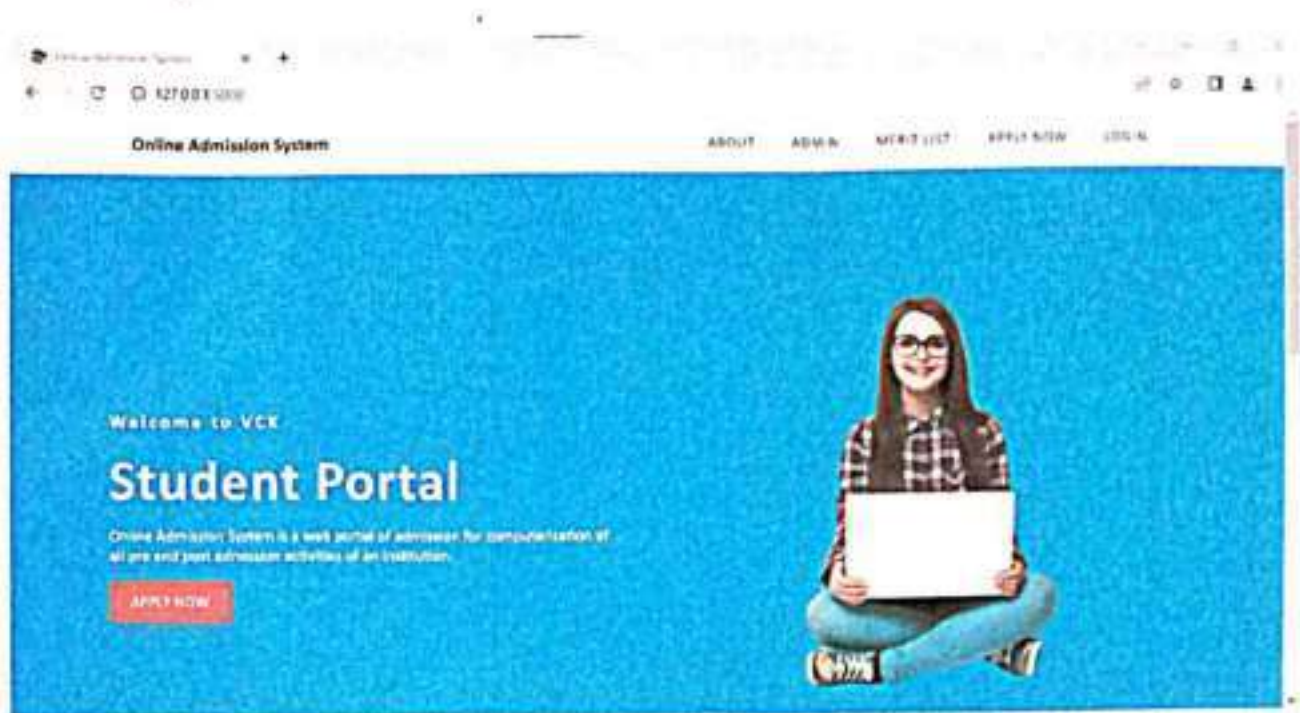
### 5. Admin Login :

Field Name	Datatype	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	Auto_increment
username	vvarchar(40)	NO		NULL	
password	vvarchar(40)	NO		NULL	



# Output Screen

Home Page :



# About College :



## About College

Prakasam College, Kalluru was first established in 1984 is known as one of the best quality colleges in Mahabubnagar. The UGC- granted autonomy to this college from the academic year 2015-16. About 8000 students are enrolled every year for various programmes. Besides the conventional programmes like B.A., B.Com and B.Sc., the college offers the professional programmes like B.B.A., B.C.A., B.C.S., B.Sc. - Biotechnology, B.Sc. Microbiology, B.Sc. - Computer College and M.B.A. The college also provides opportunities to undertake degrees like B.A., B.Com, B.Sc., B.Lib., M.Lib. and M.B.A. of UGC/NAAC.

The college has also acquired reputation in the fields of dance, drama, music, art and sports. Besides academics, the college has been securing the first place for last three years in winning numerous number of All India University Merit Scholarships. The faculty of the college are not only excellent in teaching but also in research. Till date in all 27 areas and major research projects are undertaken by the faculty.

The college has won the 'Mighty/Nagendran Temple of Sports University for the Best College in the field of sports for eleven years continuously. Swaty/Swati and Swikand/Swift are the trophies of the 'ChhatrapatiSahuji Award'. Bhatkambhar is the winner of the Asian Games held in Indonesia in August 2018. Rishi/Sureshwar and Govindan/Khande represented India in London Olympics-2012 which is a historic moment in both being in the same college. Till date the college has produced more than 250 national and 10 international sports persons.

The college has also proved its talent in the field of cultural activities by winning General Championship in the Central Youth Festival of the university for seven consecutive years. The student Usha/Sheela is first runner up in the winner of 'The Best Actress National Award-2011' for her performance in Marathi film 'Dhruv'. Presently over three per cent students are admitted in the five different Merit/Rank.

The Placement Cell is very active in during last five years 147 students are placed in the various organizations like Wipro, Infosys, TCS, Feroz Conspectus, Elara, Reliance Insurance, Federal Bank and South Indian Bank. The students are also guided for State Civil Services examinations at our Competitive Examination Guidance Centre which has produced more than 100 officers during the last five years.

Considering the strengths of the college, the NAAC, Bangalore has recognized the college with 'A' Grade. The college is identified twice as the 'College with Potential for Excellence' by the UGC, and included as 'The Star College Scheme' by the DIT, Govt. of India.

# Courses :

## I. Arts :



## Arts Courses

The registration form for admissions in undergraduate UG courses will be opened from 8th August 2021.

Under Graduate
ARTS (B.A.)
Marathi
Hindi
English
Geography
Sociology
Economics
Political Science
Human Science
History



## 2. Commerce :



### Commerce Courses

The registration form for admissions to undergraduate (U.G) courses will be opened from 9th August 2022

Under Graduate
COMMERCE
ADVANCE ACCOUNTING
INDUSTRIAL MANAGEMENT
PROFESSIONAL PROGRAMME
BBA
BCA

## 3. Science :



### Science Courses

The registration form for admissions to undergraduate (U.G) courses will be opened from 9th August 2022

Under Graduate
SCIENCE
Physics
Chemistry
Mathematics
Statistics
Electronics
Computer Science
Botany
Zoology
Microbiology
Biotechnology
Computer Science Entry
Biotechnology Entry

### Registration Form :



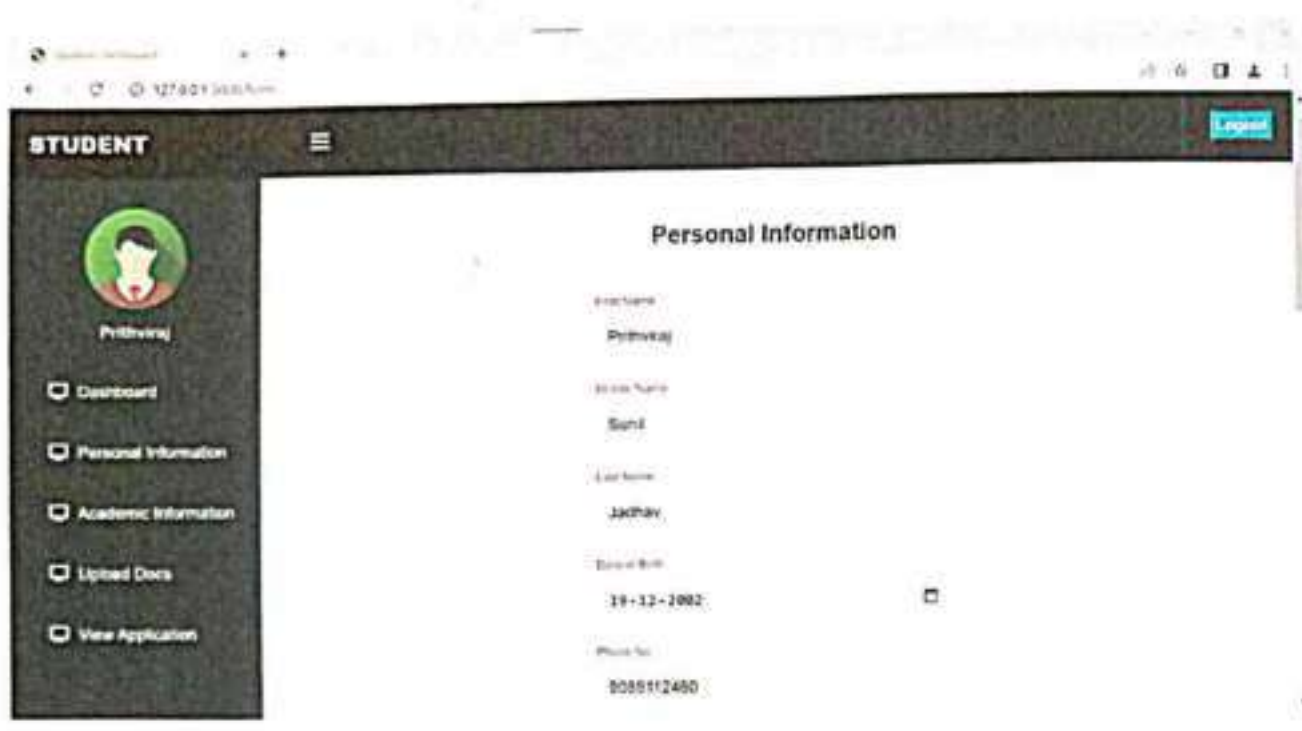
### Login Form :



# Student Dashboard :

The screenshot shows a web browser displaying a student dashboard. The browser's address bar shows the URL "127.0.0.1:5000/dashboard". The dashboard has a dark theme. At the top left, the word "STUDENT" is displayed in white. To its right is a hamburger menu icon. In the top right corner, there is a blue "Logout" button. On the left side, there is a vertical sidebar containing a circular profile picture of a person with the name "Prithvraj" below it. Underneath the profile, there is a list of menu items, each with a square icon: "Dashboard", "Personal Information", "Academic Information", "Upload Docs", and "View Application". The main content area of the dashboard displays the text "Welcome To Dashboard" in a large, bold, black font.

# Personal Information :





**STUDENT** Logout

  
Prithvraj

- Dashboard
- Personal Information
- Academic Information
- Upload Docs
- View Application

Name: Parthab  
 District: Kolhapur  
 State: Maharashtra  
 Gender:   
 Category:   
 School:   
 Submit

Academic Information :

**STUDENT** Logout

  
Prithvraj

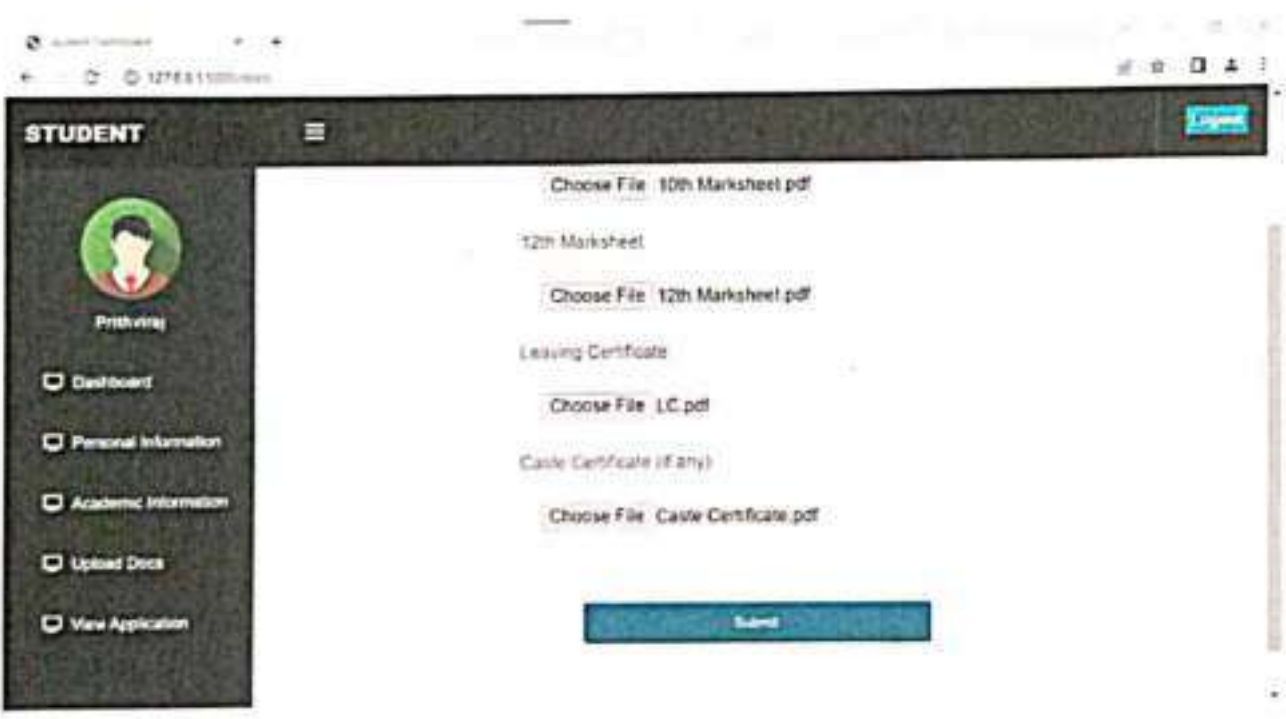
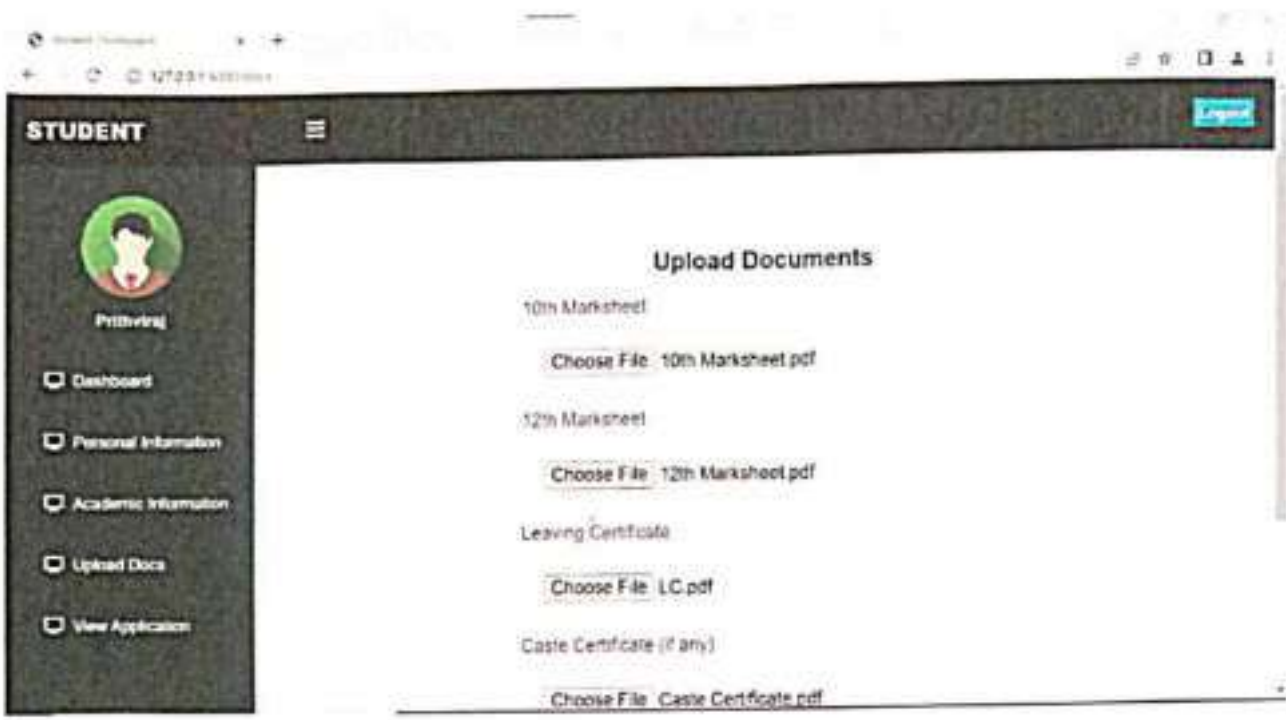
- Dashboard
- Personal Information
- Academic Information
- Upload Docs
- View Application

**Academic Information**

Class	Class X	Class XII
Board	Maharashtra Board	Maharashtra Board
Institute Name	ambit public school	Vivekanand College, Kolhapur
Exam Seat No.	F105746	X340546
Percentage	84.13	76.49
Year of Passing	2017	2019

Submit

# Upload Documents :



# View Application :

The screenshot shows a web application interface for a student. On the left is a dark sidebar with the title "STUDENT" and a profile picture of a person named "Prithviraj". Below the profile picture are menu items: "Dashboard", "Personal Information", "Academic Information", "Upload Docs", and "View Application". The main content area has a header "Vivekanand College, Kolhapur" and a sub-header "Admission Form". Below this is a table with personal details.

firstname	Prithviraj
middlename	Sunil
lastname	Jadhav
dob	2002-12-18
phone	9089112460
gender	male
birthplace	Parhala
bloodgroup	O+
maritalstatus	Unmarried
street	Parhala
city	Parhala
district	Kolhapur
state	Maharashtra

The screenshot shows the same web application interface as above, but the main content area displays academic information. The sidebar and header remain the same. The table below lists academic details.

religion	hindu
category	OBC
id	52
subjects	PCMS
k_board	Maharashtra Board
kl_board	Maharashtra Board
k_institute	ambai public school
kl_institute	Vivekanand College, Kolhapur
k_seatno	F100748
kl_seatno	X349848
k_percentage	84.13
kl_percentage	76.69
k_passingyr	2017
kl_passingyr	2019
student2 id	52

[Download](#)



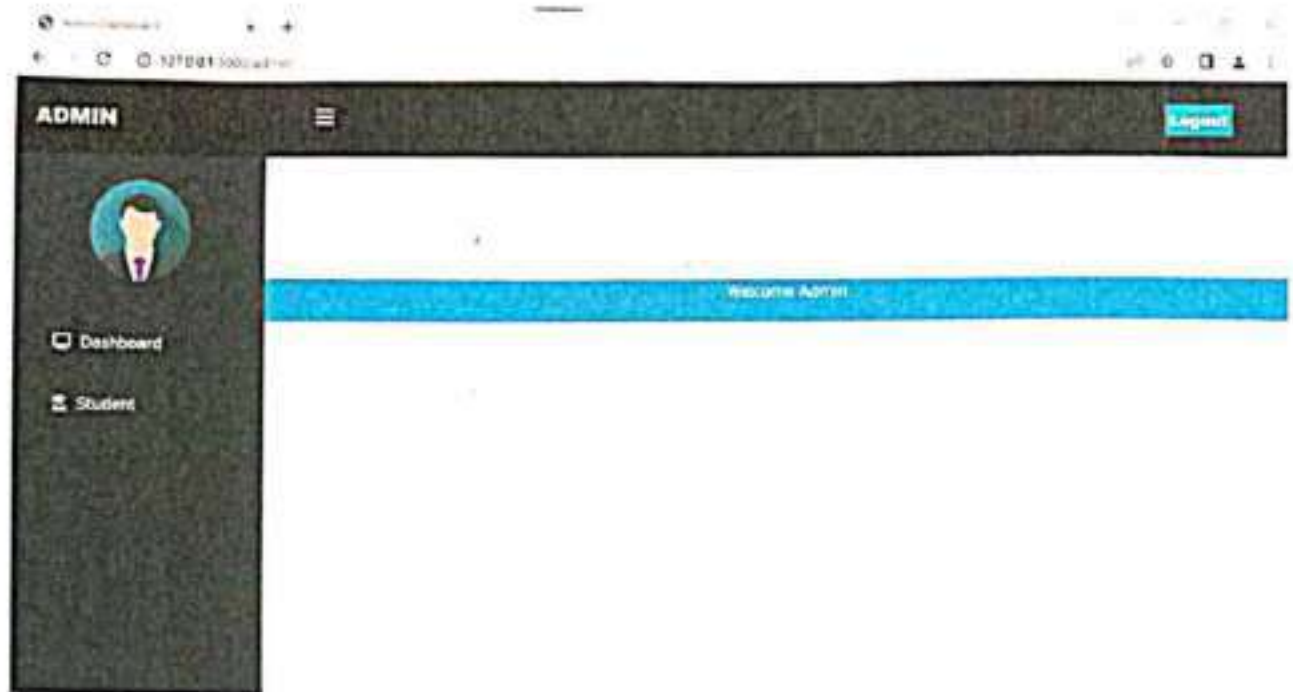
# Admin Panel :

## Admin Login :





# Admin Dashboard :



# Student Information :



# Registered Students List :

The screenshot shows an Admin dashboard with a sidebar on the left containing a profile icon, a 'Logout' button, and menu items for 'Dashboard' and 'Student'. The main content area displays a table titled 'All Students' with 11 rows of student data.

All Students			
id	username	lastname	email
1	pinky	Pg123	pk@gmail.com
2	arunp	Ag123	ak@gmail.com
3	sunil	kingstark	king@gmail.com
4	sunil	sg12	sg@gmail.com
5	ram	Rg123	rg@gmail.com
6	nitish	Rg123	R@gmail.com
7	Sekay	seki@7744	241104vnight@gmail.com
8	pratik	Pg123	pr@gmail.com
9	achraf	achraf@123	achraf@gmail.com
10	Ashraf	ashraf@123	ashraf@gmail.com
11	Pranav	pr@1234	pranav@gmail.com

# View all Students :

The screenshot shows an Admin dashboard with a sidebar on the left containing a profile icon, a 'Logout' button, and menu items for 'Dashboard' and 'Student'. The main content area displays a table titled 'Registered Students' with 15 rows of student data, including a 'View Application' link for each entry.

Registered Students					
id	Username	lastname	DOB	phone	View Application
6	nitish	nitish	2001-06-17	9876543210	<a href="#">View Application</a>
5	ram	ram	2001-06-24	9876543210	<a href="#">View Application</a>
4	sunil	sunil	2001-07-24	9876543210	<a href="#">View Application</a>
8	Achraf	Mule	2002-01-18	888111334	<a href="#">View Application</a>
10	Ashraf	Pan	2001-06-10	766410963	<a href="#">View Application</a>
11	Pranav	Shree	2001-02-23	766410963	<a href="#">View Application</a>
12	Nitesh	Chougale	2001-06-13	800432109	<a href="#">View Application</a>
13	Rudran	Pan	2001-02-11	776644554	<a href="#">View Application</a>
14	Ravi	Sharma	2001-08-02	887754321	<a href="#">View Application</a>
15	Sankar	Pan	2001-08-08	888113309	<a href="#">View Application</a>

## View Application :

Admin Dashboard

127.0.0.1:5000/verify/55

ADMIN

Logout



Dashboard

Student

### Vivekanand College, Kolhapur

#### Admission Form

firstname	Rohit
middlename	Sanjay
lastname	Kol
dob	2001-03-27
phone	9966705432
gender	male
birthplace	Panhala
bloodgroup	O-
maritalstatus	Unmarried
street	Lokar Colony
city	Kolhapur
district	Kolhapur

## Merit List :

127.0.0.1:5000/merit\_list

127.0.0.1:5000/merit\_list

### Merit List

Sr No.	Firstname	Lastname	Percentage	Caste	MR
1	karishma	mal	97.50	Open	27
2	Omkar	Daware	93.60	Open	57
3	ruturaj	patil	81.56	Open	6
4	Ruturaj	Inamdar	78.09	Open	35
5	Kedar	Kumthekar	78.09	Open	38
6	kajal	kalyar	77.5	Open	29
7	Pratik	Chavan	77	Open	8
8	veshman	surar	76.79	OBC	22
9	Prathviraj	Jadhav	76.69	OBC	52
10	Pranjal	Shinde	76.66	Open	11
11	Amar	Patil	76.66	Open	33
12	Om	Patil	76.66	NT(B)	47
13	Shivans	Patil	76.66	Open	48
14	Sneha	Khot	76.66	NT(C)	58



## All students

Date:- 01 / 06 / 22

Sr.No	First Name	Last Name	Percentage	Caste
1	ruturaj	patil	81.56	Open
2	Ashraf	Mulla	64.46	Open
3	Abhishek	Patil	62.00	NT(C)
4	Pranjal	Shintre	76.66	Open
5	Ketan	Chouqule	71.08	OBC
6	Aadesh	Patil	68.90	SC
7	Rohit	Sharma	68.90	Open
8	Santosh	Patil	60.50	Open
9	Vishal	Waghmare	72	Open
10	Siddharth	Patil	62.00	Open
11	Ashutosh	Shivane	70.20	SBC
12	Rohan	Patil	60.76	Open
13	Sujit	Patil	63.44	SBC
14	sayali	jadhav	68.15	Open
15	vaishnavi	sutar	76.79	OBC
16	akshata	mahadik	65.40	Open
17	Preeti	Katyar	70.92	Open
18	vaishnavi	Jadhav	65	Open
19	karishma	mali	97.50	Open
20	tasmiya	jamadar	67.50	Open
21	kajal	katyar	77.5	Open
22	vaishnavi	khurandale	72.67	Open
23	Sanjay	More	68.90	Open
24	Pratik	Chavan	77	Open
25	Raj	Patil	59	Open
26	Abhijeet	Gonde	66	Open
27	Sourabh	Patil	75	Open
28	Amar	Patil	76.66	Open
29	Prathmesh	Bodake	62.00	NT(D)
30	Ruturaj	Inamdar	78.09	Open
31	Sammed	Patil	61	Open
32	Uditanshu	Prabhavle	67.50	SC
33	Kedar	Kumthekar	78.09	Open
34	Siddhesh	Lohar	70.90	Open
35	Santosh	Gurav	74.80	NT(C)
36	Komal	Chavan	67.50	Open
37	Ankit	Kadwale	67.50	Open
38	Aditya	Kamble	67.50	NT(B)
39	Anjali	Kamble	64.46	ST
40	Swarup	Mane	71.08	OBC
41	Rutika	Nikam	68.90	OBC
42	Om	Patil	76.66	NT(B)
43	Shivani	Patil	76.66	Open
44	Payal	Desai	71.08	SBC
45	Rohit	Koli	67.50	SBC
46	Neha	Shinde	62.00	SC
47	Prithviraj	Jadhav	76.69	OBC
48	Sumit	Parit	71.08	SBC
49	Pooja	Patil	72.78	Open
50	Varsha	Chavan	68.90	OBC
51	Aniket	Patil	72.09	NT(D)
52	Omkar	Daware	83.60	Open
53	Sneha	Khot	76.66	NT(C)
54	Mansi	Patil	74.80	Open
55	Ankita	Chouqule	76.66	OBC
56	sanket	patil	76.09	ST
57	ram	patil	71.08	SC

58	Vivek	Patil	65.43	OBC
59	Amol	Patil	57.87	Open
60	Pravin	Mali	78.89	OBC
61	Akshata	Patil	80.08	Open
62	Pradnya	Mali	77.89	OBC
63	Prachi	Jadhav	78.09	ST
64	Sayali	Patil	71.35	Open
65	Sanika	Patil	72.78	Open
66	Shraddha	Sutar	80.78	OBC
67	Nilesh	Patil	71.85	OBC
68	Ashish	Patil	81.09	Open
69	Mrudula	Khade	75.90	SC
70	Apurva	Powar	70.78	SC
71	Akash	Deasi	68.10	SC
72	Sammed	Barwade	70.85	SC
73	Pankaj	Khandare	72.80	OBC
74	Ananya	Kadwale	72.90	SC
75	Sunil	Mane	56.98	SC

-end of report-

**General Merit List**  
**Academic Year 2021-2022**

Date:- 01 / 06 / 22

Sr.No	First Name	Last Name	Percentage	Caste
1	karishma	mali	97.50	Open
2	Omkar	Daware	83.60	Open
3	ruturaj	patil	81.56	Open
4	Ashish	Patil	81.09	Open
5	Shraddha	Sutar	80.78	OBC
6	Akshata	Patil	80.08	Open
7	Pravin	Mali	78.89	OBC
8	Ruturaj	Inamdar	78.09	Open
9	Kedar	Kumthekar	78.09	Open
10	Prachi	Jadhav	78.09	ST
11	Pradnya	Mali	77.89	OBC
12	kajal	katyar	77.5	Open
13	Pratik	Chavan	77	Open
14	vaishnavi	sutar	76.79	OBC
15	Prithviraj	Jadhav	76.69	OBC
16	Pranjal	Shintre	76.66	Open
17	Amar	Patil	76.66	Open
18	Om	Patil	76.66	NT(B)
19	Shivani	Patil	76.66	Open
20	Sneha	Khot	76.66	NT(C)
21	Ankita	Chougule	76.66	OBC
22	sanket	patil	76.09	ST
23	Mrudula	Khade	75.90	SC
24	Sourabh	Patil	75	Open
25	Santosh	Gurav	74.80	NT(C)
26	Ananya	Kadwale	72.90	SC
27	ram	patil	71.08	SC
28	Sammed	Barwade	70.85	SC
29	Apurva	Powar	70.78	SC
30	Anjali	Kamble	64.46	ST

-end of report-



### Merit List (Categorywise)

Academic Year 2021-2022

Caste - SC

Date:- 01 / 06 / 22

Sr.No	First Name	Last Name	Percentage	Caste
1	Mrudula	Khade	75.90	SC
2	Ananya	Kadwale	72.90	SC
3	ram	patil	71.08	SC
4	Sammed	Barwade	70.85	SC
5	Apurva	Powar	70.78	SC
6	Aadesh	Patil	68.90	SC
7	Akash	Deasi	68.30	SC
8	Uditanshu	Prabhavle	67.50	SC
9	Neha	Shinde	62.00	SC
10	Sunil	Mane	56.98	SC

-end of report-



**Merit List (Categorywise)**

**Academic Year 2021-2022**

**Caste - OBC**

**Date:- 01 / 06 / 22**

Sr.No	First Name	Last Name	Percentage	Caste
1	Shradha	Sutar	80.78	OBC
2	Pravin	Mali	78.89	OBC
3	Pradnya	Mali	77.89	OBC
4	Vaishnavi	Sutar	76.79	OBC
5	Prihviraj	Jadhav	76.69	OBC
6	Ankita	Chougule	76.66	OBC
7	Pankaj	Khandare	72.80	OBC
8	Nilesh	Patil	71.85	OBC
9	Ketan	Chougule	71.08	OBC
10	Swarup	Mane	71.08	OBC

-end of report-

# CONCLUSION

The project report on Online Admission System benefits the following features :

1. There is no necessity to maintain so many records in files and registers.
2. The manual work is reduced.
3. Increase accuracy and efficiency.
4. The system is user friendly.
5. The system avoid hectic submission process.
6. Data storage and retrieval will become faster and easier to maintain because data is stored in systematic manner and in a single database.

Through these feature it will increase the efficiency, accuracy and transparency.

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4. [www.youtube.com](http://www.youtube.com)



"Education for Knowledge, Science, and Culture"  
- Shri Swami Vivekanand

Shri Swami Vivekanand Shikshan Sanstha's  
**Vivekanand College, Kolhapur**  
**(Autonomous)**



**B.Sc. Mathematics Student Projects 2021-22**

Sr. No.	Name of the Student	Title of the Project
1	BAGADI SHIVANI PRASHANT	Some famous numbers
2	BANKAR ASHWINI RAJARAM	Methods of variation of parameter
3	BENDAKE VASUNDHARA ATUL	Transportation Methods
4	BHOSALE SAMIKSHA SUBHASH	Differential Equation
5	DESAI FIZA SIKANDER	The study of venn Diagram
6	DESAI PRATIKSHA JITENDRA	Importance of Mathematics in daily life
7	KADVEKAR VAIBHAV MARUTI	Soddy Circle
8	KAMBLE MRUNALI RAMESH	History of matrix
9	KHAMKAR AKASH BABURAO	Mathematics in Nature
10	KOLEKAR ABHINANDAN LAXMAN	Balancing chemical equation by using matrices
11	KOSHTI SHWETA JITENDRA	Application of matrix
12	KOTI NIKITA PRAKASH	Maths magic tricks and methods
13	MAGDUM SAMRUDDHI GUNDA	Calculus and its application
14	MORE MADHUMATI TANAJI	Vedic mathematics
15	MUJAWAR SANIYA NIYAJ	Types of primes
16	NAGARJI RAHIM NURMAHAMAD	Application of game theory
17	PAREEK SANGEETA RAMAWATAR	Application of graph theory in network
18	PARIT SUMIT DIPAK	Oneness of Natural Number
19	PATIL KALYANI PANDURANG	Harmonic analysis in fourier series
20	PATIL PRANITA RAJENDRA	Curve tracing in cartesian form
21	PATIL ROHINI VILAS	Golden ratio
22	PATIL SHREYA SHAHAJI	Fibonacci numbers
23	PATIL SHRIYA SURESH	A study of pascal triangle
24	PATIL VAISHALI SHIVANAND	Scoring system of candy crush game
25	RAJPUT AJAY RAVASAHEB	Indian Mathematicians and their contributions
26	RANDIVE RUTUJA ARVIND	Gamma and beta function
27	TANDALE SRUSHTI	Eulers identity



	RAVINDRA	
28	TERDALE PRANJALI ANANDKUMAR	invention of zero
29	THANEKAR VAIBHAV MAHENDRA	Mathematics in world
30	TONPE SEJAL VIJAY	Proofs of pythagoras theorem

*S. P. Thorat*

Dr. S. P. Thorat

Head of the Department,  
Department of Mathematics,  
Vivekanand College, Kolhapur.

**A Project Submitted to**  
**Vivekanand College , Kolhapur(Autonomous)**



**Affiliated to**  
**Shivaji University , Kolhapur**  
**For the Degree of Bachelor of Science**

**In**  
**Mathematics**  
**BY**  
**SHREYA SHAHAJI PATIL**

Roll No :-7893

Exam Seat No :-

PRN No :- 2019037147

B.Sc III(Mathematics)

Year 2021-22

**Under the Guidance of**

Mr. Patankar S.P (H.O.D) Department of  
Mathematics

Mr. Thorat S.P (Department of Mathematics)

"Education for Knowledge, Culture and Science"  
... Shikshanmaharshi Dr. Bapuji Salunkhe.

**Shri. Swami Vivekanand Shikshan Sanstha ,  
kolhapur's**

**VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR**  
**DEPARTMENT OF MATHEMATICS**

**CERTIFICATE**

This is to certify that **Miss .SHREYA SHAHAJI PATIL** has successfully completed the project work on topic "**FIBONACCI NUMBERS**" towards the partial fulfilment for the course of Bachelor of Science (Mathematics) work of Vivekanand College (Autonomous) Kolhapur affilited to Shivaji University, Kolhapur during the academic year 2021-2022 .This report represents the bonafide work of student.

Place :- Kolhapur

Date :- 28/05/2022

*Prithvi*  
Teacher In-charge.

*HO*  
Examiner

*S.P.*  
Mr. S.P. Patankar  
- **HEAD**  
Department of Mathematics  
Vivekanand College, Kolhapur



# DECLARATION

I undersigned hereby declare that project entitled "FIBONACCI NUMBERS". Completed under the guidance of Mr. S.P. Patankar sir and Mr. S. P. Thorat sir (Department of Mathematics, Vivekanand College Kolhapur). Based on the experiment results and cited data . I declare that this is my original work which is submitted to , Vivekanand College Kolhapur in this academic year.

*Patil*

Miss.SHREYA SHAHAJI PATIL

Date = 28/05/2022

कोल्हापूर



# ACKNOWLEDGEMENT

---

On the day of completion of this project , the numerous memories agreeing rushed in my mind with full of gratitude to this encouraged and helped me a lot at various stages of this work.

I offer sincere gratitude to all of them . I have great pleasure to express my deep sense of indebtedness and heart of full gratitude to my project guide Mr. S.P. Patankar sir . For his expert and valuable guidance and continuous encouragement given to me during the course of project work.

I am thankful to prin. Dr. R.R .Kumbhar sir (Principal, Vivekanand College) and Mr. S.P. Patankar sir ( H.O.D Dept. of Mathematics ) for allowing me to carry out our project work and extending me all the possible infra-structural facilities of department.

I would like to thank all my teachers Mr. S.P. Thorat sir , Mr. G.B. Kolhe sir and Miss. S.M. Malavi mam for co-oration, help and maintaining cheerful environment during my project.

I would also like to thanks non-teaching staff Mr. Birnale.

I would like to thanks my entire dear friends for their constant encouragement and co-oration .I am indebted to my parents who shaped me to this status with their blunt less vision and selfness agenda.

Place :- Kolhapur

Date :- 28/05/2022

Miss. SHREYA SHAHAJI PATIL



# INDEX

- ↓ Introduction
- ↓ Simple Properties of the Fibonacci Number
- ↓ Game about Fibonacci Number
- ↓ Application in Botany
- ↓ Application in Zoology
- ↓ Application in Composition
- ↓ Application in Bees
- ↓ Reference



# Introduction

The term "Fibonacci numbers" is used to describe the series of numbers generated by the pattern

1; 1; 2; 3; 5; 8; 13; 21; 34; 55; 89; 144.....

where each number in the sequence is given by the sum of the previous two terms.

This pattern is given by  $u_1 = 1, u_2 = 1$  and the recursive formula

$$u_n = u_{n-1} + u_{n-2}, n > 2$$

First derived from the famous "rabbit problem" of 1228, the Fibonacci numbers were originally used to represent the number of pairs of rabbits born of one pair in a certain population. Let us assume that a pair of rabbits is introduced into a certain place in the first month of the year. This pair of rabbits will produce one pair of offspring every month, and every pair of rabbits will begin to reproduce exactly two months after being born. No rabbit ever dies, and every pair of rabbits will reproduce perfectly on schedule. So, in the first month, we have only the first pair of rabbits. Likewise, in the second month, we again have only our initial pair of rabbits. However, by the third month, the pair will give birth to another pair of rabbits, and there will now be two pairs. Continuing on, we find that in month four we will have 3 pairs, then 5 pairs in month four, then 8, 13, 21, 34, ..., etc, continuing in this manner. It is quite apparent that this sequence directly corresponds with the Fibonacci sequence introduced above, and indeed, this is the first problem ever associated with the now-famous numbers.

Now that we have seen one application of the Fibonacci numbers and established a basic definition.

## Simple Properties of the Fibonacci Numbers

Lemma 1. Sum of the Fibonacci Numbers

The sum of the first 'n' Fibonacci numbers can be expressed as

$$u_1 + u_2 + \dots + u_{n-1} + u_n = u_{n+2} - 1$$

**Proof.** From the definition of the Fibonacci sequence, we know

$$u_1 = u_3 - u_2,$$

$$u_2 = u_4 - u_3,$$

$$u_3 = u_5 - u_4,$$

⋮

$$u_{n-1} = u_{n+1} - u_n,$$

$$u_n = u_{n+2} - u_{n+1}.$$

We now add these equations to find

$$u_1 + u_2 + \dots + u_{n-1} + u_n = u_{n+2} - u_2$$

Recalling that  $u_2 = 1$  we see this equation is equivalent to our initial conjecture of

$$u_1 + u_2 + \dots + u_{n-1} + u_n = u_{n+2} - 1.$$

Lemma 2. Sum of Odd Terms

The sum of the odd terms of the Fibonacci sequence

$$u_1 + u_3 + u_5 + \dots + u_{2n-1} = u_{2n}.$$

**Proof.** Again looking at individual terms, we see from the definition of the sequence that

$$u_1 = u_2,$$

$$u_3 = u_4 - u_2,$$

$$u_5 = u_6 - u_4,$$



$$u_{2n-1} = u_{2n} - u_{2n-2}$$

If we now add these equations term by term, we are left with the required result from above.

**Lemma 3. Sum of Even Terms**

The sum of the even terms of the Fibonacci sequence

$$u_2 + u_4 + u_6 + \dots + u_{2n} = u_{2n+1} - 1.$$

**Proof:** From lemma 1, we have

$$u_1 + u_2 + \dots + u_{n-1} + u_{2n} = u_{2n+2} - 1$$

Subtracting our equation for the sum of odd terms, we obtain

$$u_2 + u_4 + \dots + u_{2n} = u_{2n+2} - 1 - u_{2n} = u_{2n+1} - 1.$$

as we desired.

**Lemma 4: Sum of Fibonacci Numbers with Alternating Signs**

The sum of the Fibonacci numbers with alternating signs

$$u_1 - u_2 + u_3 - u_4 + \dots + (-1)^{n+1}u_n = (-1)^{n+1}u_{n-1} + 1$$

**Proof:** Building further from our progress with sums, we can subtract our even sum equation from our odd sum equation to

$$(1) \quad u_1 - u_2 + u_3 - u_4 + \dots + u_{2n-1} - u_{2n} = -u_{2n-1} + 1$$

Now, adding  $u_{2n+1}$  to both sides of this equation, we obtain

$$u_1 - u_2 + u_3 - u_4 + \dots - u_{2n} + u_{2n+1} = u_{2n+1} - u_{2n-1} + 1,$$

or

$$(2) \quad u_1 - u_2 + u_3 - u_4 + \dots - u_{2n} + u_{2n+1} = u_{2n} + 1$$

Combining equations (1) and (2), we arrive at the sum of Fibonacci numbers with alternating signs:

$$u_1 - u_2 + u_3 - u_4 + \dots + (-1)^{n+1}u_n = (-1)^{n+1}u_{n-1} + 1$$

Thus far, we have added the individual terms of simple equations to derive lemmas regarding the sums of Fibonacci numbers. We will now use a similar technique

To find the formula for the sum of the squares of the first 'n' Fibonacci numbers.

**Lemma 5: Sum of Squares**

The sum of the squares of the first 'n' Fibonacci numbers

$$u_1^2 + u_2^2 + \dots + u_{n-1}^2 + u_n^2 = u_n u_{n+1}.$$

**Proof:** Note that

$$u_k u_{k+1} - u_{k-1} u_k = u_k (u_{k+1} - u_{k-1}) = u_k^2.$$

If we add the equation

$$u_1^2 = u_1 u_2,$$

$$u_2^2 = u_2 u_3 - u_1 u_2,$$

$$u_3^2 = u_3 u_4 - u_2 u_3,$$

$$u_n^2 = u_{n-1} u_n$$

term by term, we arrive at the formula we desired.

Until now, we have primarily been using term-by-term addition to find formulas for the sums of Fibonacci numbers. We will now use the method of induction to prove the following important formula.

**Lemma 6: Another Important Formula**

$$u_{n+m} = u_{n-1} u_m + u_n u_{m+1}.$$

**Proof:** We will now begin this proof by induction on m. For  $m = 1$ ,

$$u_{n+1} = u_{n-1} + u_n$$

$$= u_{n-1} u_1 + u_n u_2,$$

which we can see holds true to the formula. The equation for  $m = 2$  also proves true for our formula, as

$$u_{n+2} = u_{n+1} + u_n$$

$$= u_{n-1} + u_n + u_n$$

$$= u_{n-1} + 2u_n$$

$$= u_{n-1}u_2 + u_nu_3.$$

Thus, we have now proved the basis of our induction. Now suppose our formula to be true for  $m = k$  and for  $m = k + 1$ . We shall prove that it also holds for  $m = k + 2$ .

So, by induction, assume

$$u_{n+k} = u_{n-1}u_k + u_nu_{k+1}$$

and

$$u_{n+k+1} = u_{n-1}u_{k+1} + u_nu_{k+2}$$

If we add these two equations term by term, we obtain

$$u_{n+k} + u_{n+k+1} = u_{n-1}(u_k + u_{k+1}) + u_n(u_{k+1} + u_{k+2})$$

$$u_{n+k+2} = u_{n-1}u_{k+2} + u_nu_{k+3},$$

which was the required result. So, by induction we have proven our initial formula holds true for  $m = k + 2$ , and thus for all values of  $m$ . \_

**Lemma 7: Difference of Squares of Fibonacci Numbers**

$$u_{2n} = u_{n+1}^2 - u_{n-1}^2$$

**Proof.** Continuing from the previous formula in Lemma 7, let  $m = n$ . We obtain

$$u_{2n} = u_{n-1}u_n + u_nu_{n+1},$$

or

$$u_{2n} = u_n(u_{n-1} + u_{n+1}).$$

Since

$$u_n = u_{n+1} - u_{n-1},$$

we can now rewrite the formula as follows:

$$u_{2n} = (u_{n+1} - u_{n-1})(u_{n+1} + u_{n-1}),$$

or

$$u_{2n} = u_{n+1}^2 - u_{n-1}^2$$

Thus, we can conclude that for two Fibonacci numbers whose positions in the sequence difference by two, the difference of squares will again be a Fibonacci number.



Fibonacci Numbers and Pascal's Triangle: The Fibonacci numbers share an interesting connection with the triangle of binomial coefficients known as Pascal's triangle.

Pascal's triangle typically takes the form:

(3)

$$\begin{array}{c}
 1 \\
 1 \ 1 \\
 1 \ 2 \ 1 \\
 1 \ 3 \ 3 \ 1 \\
 1 \ 4 \ 6 \ 4 \ 1
 \end{array}$$

In this depiction we have oriented the triangle to the left for ease of use in our future application. Pascal's triangle, as may already be apparent, is a triangle in which the topmost entry is 1 and each following entry is equivalent to the term directly above plus the term above and to the left.

Another representation of Pascal's triangle takes the form:

(4)

$$\begin{array}{cccccc}
 C_0^0 & & & & & \\
 C_1^0 & C_1^1 & & & & \\
 C_2^0 & C_2^1 & C_2^2 & & & \\
 C_3^0 & C_3^1 & C_3^2 & C_3^3 & & \\
 C_4^0 & C_4^1 & C_4^2 & C_4^3 & C_4^4 &
 \end{array}$$

In this version of Pascal's triangle, we have  $C_j^i = \frac{k!}{i!(k-i)!}$ , where  $i$  represents the column and  $k$  represents the row the given term is in. Obviously, we have designated the first row as row 0 and the first column as column 0.

Finally, we will now depict Pascal's triangle with its rising diagonals.

$$\begin{array}{cccccccc}
 1 & & & & & & & \\
 1 & 1 & & & & & & \\
 1 & 2 & 1 & & & & & \\
 1 & 3 & 3 & 1 & & & & \\
 1 & 4 & 6 & 4 & 1 & & & \\
 1 & 5 & 10 & 10 & 5 & 1 & & \\
 1 & 6 & 15 & 20 & 15 & 6 & 1 &
 \end{array}$$

Figure 1: Pascal's Triangle with Rising Diagonals



The diagonal lines drawn through the numbers of this triangle are called the "rising diagonals" of Pascal's triangle. So, for example, the lines passing through 1; 3; 1 or 1; 4; 3 would both indicate different rising diagonals of the triangle. We now go on to relate the rising diagonals to the Fibonacci numbers

Theorem 1: The sum of the numbers along a rising diagonal in Pascal's triangle is a Fibonacci number.

Proof: Notice that the topmost rising diagonal only consists of 1, as does the second rising diagonal. These two rows obviously correspond to the first two numbers of the Fibonacci sequence.

To prove the proposition, we need simply to show that the sum of all numbers in the  $(n - 2)^{nd}$  diagonal and the  $(n - 1)^{st}$  diagonal will be equal to the sum of all numbers in the  $n$ th diagonal in Pascal's triangle.

The  $(n - 2)^{nd}$  diagonal consists of the number

$$C_{n-3}^0, C_{n-4}^1, C_{n-5}^2, \dots$$

and the  $(n - 1)^{st}$  diagonal has the numbers

$$C_{n-2}^0, C_{n-3}^1, C_{n-4}^2, \dots$$

We can add these numbers to find the sum

$$C_{n-2}^0 + (C_{n-3}^0 + C_{n-3}^1) + (C_{n-4}^1 + C_{n-4}^2) + \dots$$

However, for the binomial coefficients of Pascal's triangle,

$$C_{n-2}^0 = C_{n-1}^0 = 1$$

and

$$\begin{aligned} C_k^i + C_k^{i+1} &= \frac{k(k-1)\dots(k-i+1)}{1.2\dots i} + \frac{k(k-1)\dots(k-i+1)(k-i)}{1.2\dots i(i+1)} \\ &= \frac{k(k-1)\dots(k-i+1)}{1.2\dots i} \left(1 + \frac{k-i}{i+1}\right) \\ &= \frac{k(k-1)\dots(k-i+1)}{1.2\dots i} \frac{i+1+k-i}{i+1} \\ &= \frac{(k+1)k(k-1)\dots(k-i+1)}{1.2\dots i(i+1)} \\ &= C_{k+1}^{i+1} \end{aligned}$$

We therefore arrive at the expression

$$C_{n-2}^0 + C_{n-2}^1 + C_{n-3}^2 + \dots$$

$$= C_{n-1}^0 + C_{n-2}^1 + C_{n-3}^2 + \dots$$

to represent the sum of terms of the  $n$ th rising diagonal of Pascal's triangle. Indeed, if we look at diagram (4) of Pascal's triangle, this corresponds to the correct expression. Thus, as we know the first two diagonals are both 1, and we now see that the sum of all numbers in the  $(n-1)^{st}$  diagonal plus the sum of all numbers in the  $(n-2)^{nd}$  diagonal is equal to the sum of the  $n$ th diagonal, we have proved that the sum of terms on the  $n$ th diagonal is always equivalent to the  $n^{th}$  Fibonacci number.

# Game about Fibonacci number

## Game:

Cut a  $8 \times 8$  square into four parts (as figure 1 shows), and rearrange the four parts into a new  $5 \times 13$  rectangle as figure 2 shows

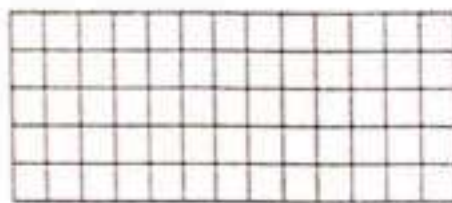
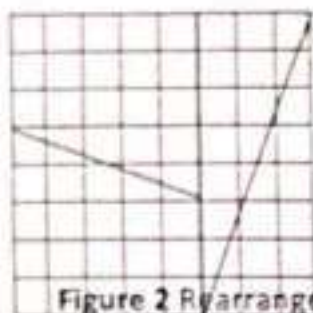


Figure 2 Rearrange into a new rectangle

### Figure 1 Original square

When we calculate the area of figure 1, we can easily get that the area of the square equals to 64. However, the area of the new rectangle equals to 65. During this process, we have not abandoned or added any piece of paper into the new rectangle, so the area of the original square and the rectangle should equal to each other. In order to figure out the reason for the area change and the hidden mathematical principle behind, we picked this game as our topic

### Mathematic principle behind

We observed the square carefully and found out that the length of the sides of the square and the rectangle are all Fibonacci numbers. We have

$$n=6$$

$$a_n = a_6 = 8, a_{n-1} = a_5 = 5, \text{ and } a_{n+1} = a_7 = 13$$

In fact, Fibonacci sequence has the following property:

$$a_{n+1}a_{n-1} = a_n^2 + (-1)^n$$

In our game, the product of  $a_{n+1}a_{n-1}$  actually represents the area of the rectangle  $S_{rectangle}$ , and  $a_n^2$  represents the area of the square  $S_{square}$ .

$$S_{rectangle} = a_7a_5 = 5 \cdot 13 = 65$$

$$S_{square} + (-1)^6 = a_6^2 + (-1)^6 = 64 + (-1)^6 = 65$$



If we observe the new rectangle carefully, we will find there is a gap on the rectangle. So the area of the original square has never changed. The area change only caused by adding extra part into the area of the rectangle.

We use the mathematical induction method to prove this property:

**Proof: Step 1:** Let  $n=1$ ,  $a_0 = 0$ ,  $a_1 = 1$ ,  $a_1 = 1$

Then equality(1) holds.

**Step 2** Suppose it is true for  $n=k$ . Then we get the equality

$$a_{k-1}a_{k+1} = a_k^2 + (-1)^k$$

**Step 3** Now we show it is true for  $n=k+1$ .

According to the definition of the Fibonacci sequence, we have the following recursion formula:

$$a_{k+1} = a_k + a_{k-1};$$

$$a_{k+2} = a_{k+1} + a_k = 2a_k + a_{k-1}$$

Then we get  $a_{k-1}(a_k + a_{k+1}) = a_k^2 + (-1)^k$

$$a_k^2 - a_{k-1}a_k - a_{k-1}^2 = (-1)^{k+1}$$

$$a_k(2a_k + a_{k-1}) = a_k^2 + 2a_k a_{k-1} + a_{k-1}^2 + (-1)^{k+1}$$

Thus

$$a_k a_{k+2} = a_{k+1}^2 + (-1)^{k+1}$$

It is true for  $n=k+1$ .

Thus property (1) is proved.

#### Another situation

When we reshape the four parts of the original square in another way as figure 3 shows, we get a new polygon. The intersection in the new polygon changes its area into 63. We can also use another property of Fibonacci sequence to explain why the change happens.

Figure 3: Rearrange four parts into a new polygon

The Fibonacci sequence also has the following

$$4a_{n-1}a_{n-2} + a_{n-2}a_{n-4} = a_n^2 + (-1)^{n-1}$$

**Proof:** For we have (2)  $a_n a_{n+2} = a_{n+1}^2 + (-1)^{n+1}$

$$4a_{n-1}a_{n-2} + a_{n-2}a_{n-4} = 4a_{n-1}a_{n-2} + a_{n-2}(2a_{n-2} - a_{n-1})$$



$$\begin{aligned}
&= a_{n-2}(3a_{n-1} + 2a_{n-2}) \\
&= a_{n-2}(a_n + a_{n-2} + 2a_{n-1}) \\
&= a_{n-1}^2 + (-1)^{n-1} + a_{n-2}^2 + 2a_{n-2}a_{n-1} \\
&= a_n^2 + (-1)^{n-1}
\end{aligned}$$

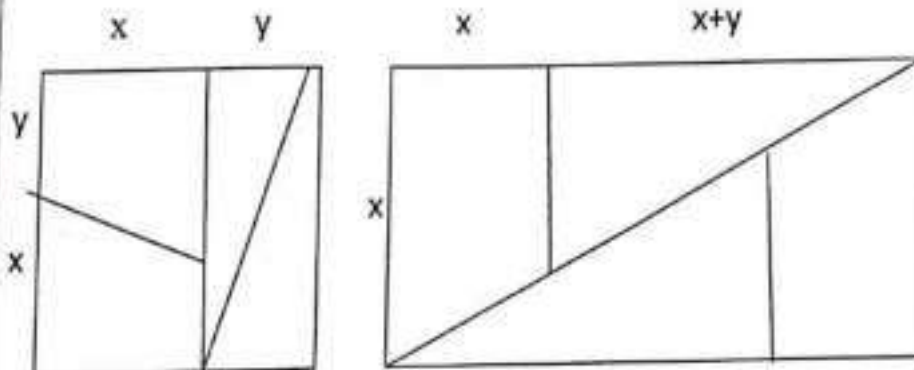
Thus the property is proved.

When we calculate the area of the new polygon, we actually do not involve the intersection part. So the area of the new polygon we get is smaller than the original square.

#### Perfect situation

After we had researched two situations above, it is reasonable to think about the question that how can we cut the original square to get a perfect rectangle.

Suppose the length of the sides are  $x$  and  $y$  as figure 4 shows, and we can get a new rectangle without any gap or intersection.



**Figure 4** The situation we can get a perfect rectangle

Suppose the area of the original square is  $S_{square}$  and the area of rectangle is  $S_{rectangle}$ . Then we have

$$S_{square} = (x + y)^2$$

$$S_{rectangle} = (2x + y)x$$

Let

$$S_{\text{square}} = S_{\text{rectangle}}$$

Then we have

$$(x + y)^2 = (2x + y)x$$

i.e.

$$(x/y)^2 - (x/y) - 1 = 0$$

Thus we get the solution

$$\frac{x}{y} = \frac{1 \pm \sqrt{5}}{2}$$

Because  $x$  and  $y$  are the length of the sides, so we only take the positive one. It is easy to realize that

$$\frac{y}{x} = \frac{2}{1 + \sqrt{5}} \approx 0.618$$

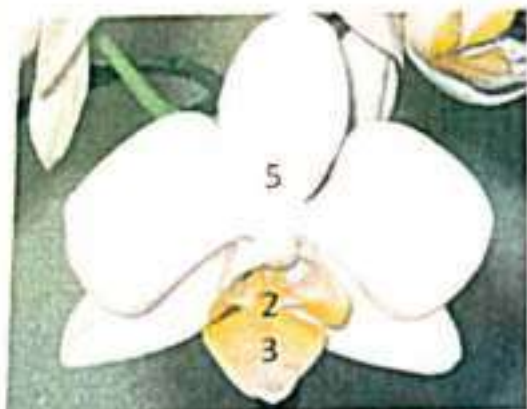
In fact, if  $y$  equals to  $a_{n-2}$  and  $x$  equals to  $a_{n-1}$  the proportion of  $x$  for  $y$  represents the proportion of  $a_{n-1}$  for  $a_{n-2}$ . When  $n$  tends to infinity, the ratio tends to be 0.618 (golden ratio). So the perfect situation above happened when  $x$  equals to  $a_{n-1}$ ,  $y$  equals to  $a_{n-2}$  and  $n$  tends to be infinity.

# Applications

## *Application in Botany*

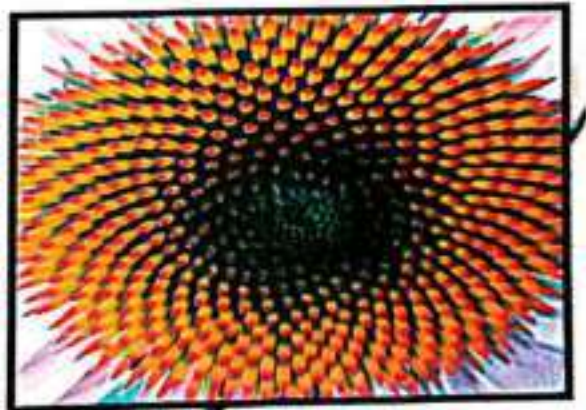


Figure 5 The Fibonacci spiral appeared in some kind of aloe

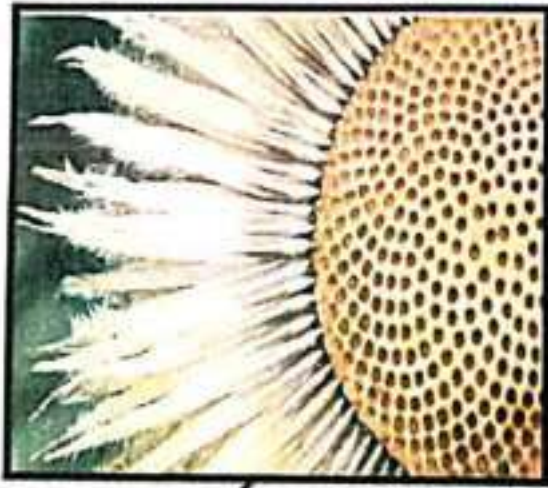




Considering the number of the petals of the flowers, some of them follow Fibonacci numbers. One possible reason for why this phenomenon happens is that they try to decrease the overlapped area to get more sunlight.

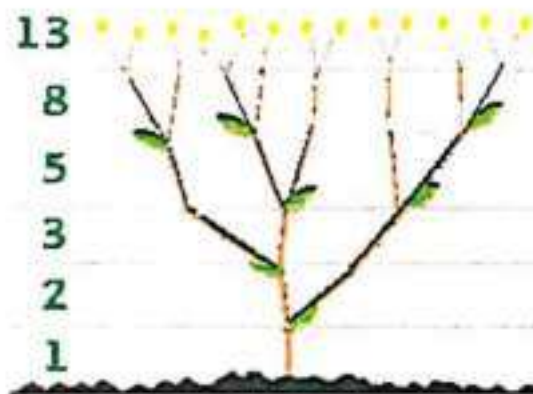






## The hidden spiral in flowers

According to figure when we count the number of its spirals, we will find there are 13 counterclockwise spirals and 21 clockwise spirals. These two numbers are both Fibonacci numbers. One possible reason for the Fibonacci spiral appears in the sunflower is to fully use the space.



Botanists also find the numbers of branches of trees are always Fibonacci number. They find that after a certain period of time, each old branch of a tree will get a new one and need one more period of time to turn to an old one. If the tree has only one branch at very beginning, after a year it will have two branches and in next circle, it has three branches. Every year the total branches of the tree composed a Fibonacci sequence. One possible reason for it is that every new branch needs one year to get mature.

Since Fibonacci numbers shows in some of the flower petal numbers and the arrangements of the inflorescence, many plants do not show any

Fibonacci number in their arrangements. In fact, scientists have not figured out the pattern accurately the plants arrange their leaves and flowers. We can only assume that plants apply Fibonacci numbers and the golden ratio in their growth to make their space utilizations more effectively. However, it is also possible that plants do not understand Fibonacci sequence at all, and may be they just grow to the shape they like.

### *Application in zoology*



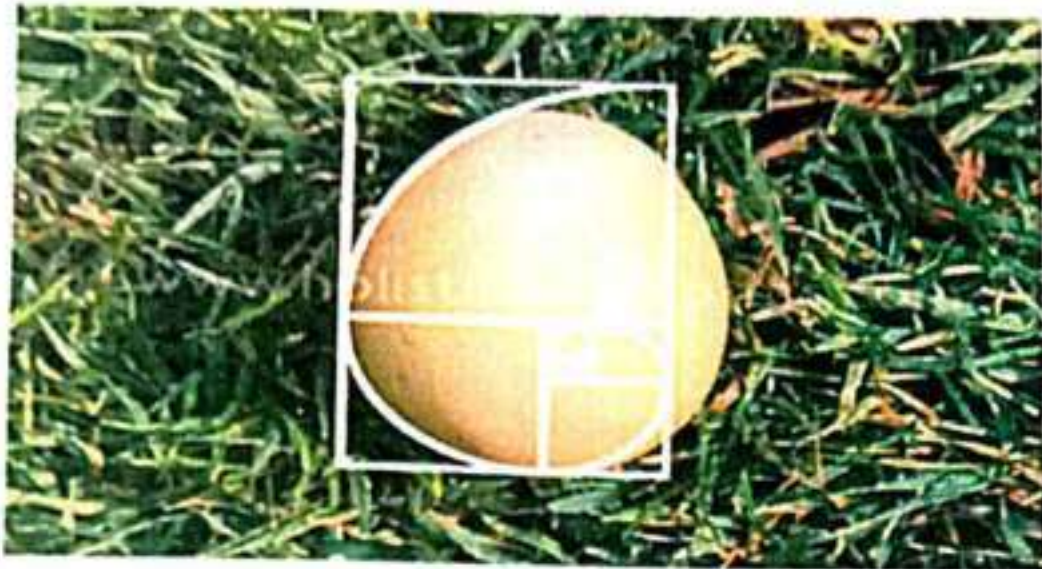




The hidden Fibonacci spiral in American Giant Millipede, Monarch caterpillar, Panther Chameleon, Snails and Fingerprints

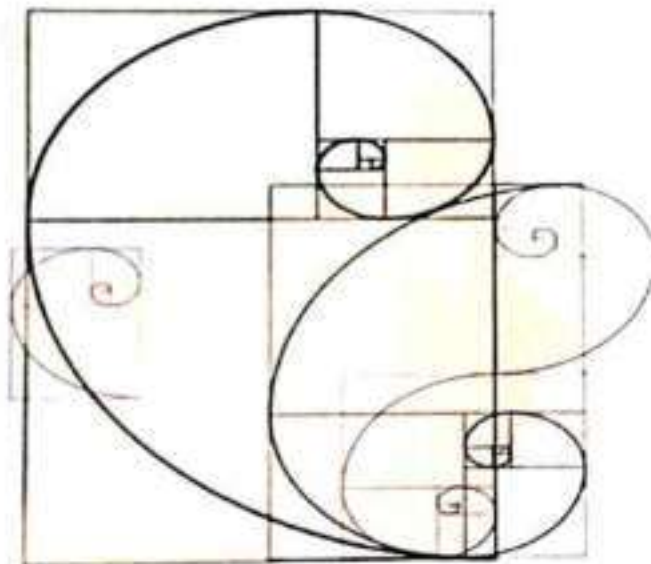
### *Application in composition*





The photographer use the spiral into composition to highlight the rose and chicken egg.

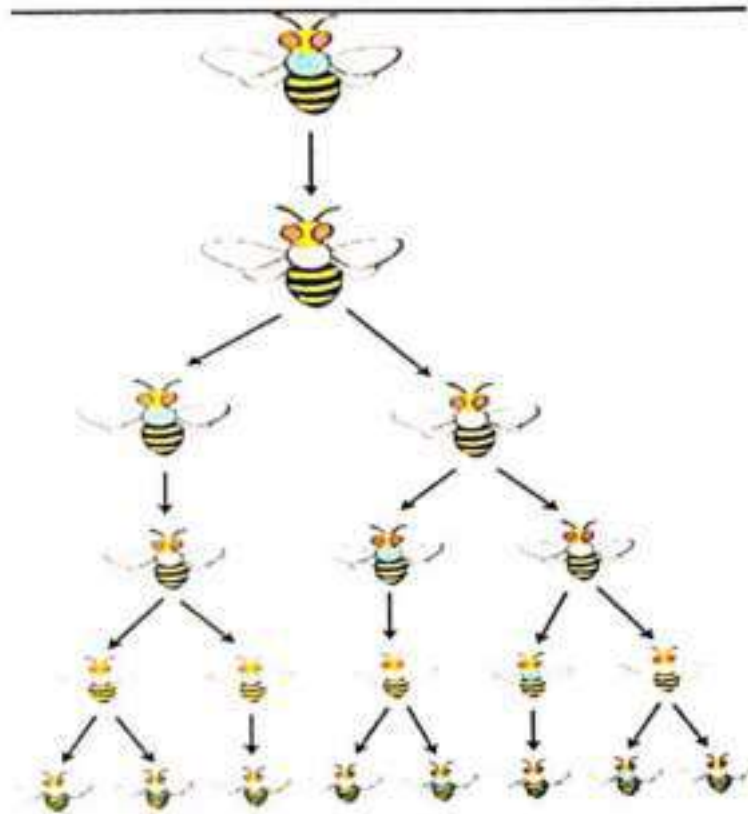
The following figure is a stage photo picked from BBC's show Sherlock. The starting point of Fibonacci spiral in figure highlights parts of girl's face. The application of Fibonacci spiral can make the picture looked more harmonious





## Application in bees

The breed form of bees is very special, for the male bees are all hatched from unfertilized eggs and the female ones are all hatched from fertilized one. Hence the male bees are only the fathers of the female ones, and male bees also have no father at all. When scientists observed the family tree of the bees, they found that the number  $G_n$  of the  $n$  generation of the first male bee equals to the  $a_n$  in Fibonacci sequence.



The family tree of male bee

## REFERENCE

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- [www.fibonacci numbers /hd/wallpaper.com](http://www.fibonacci numbers /hd/wallpaper.com)
- [Wikipedia.com](http://Wikipedia.com)

Thank You

**Vivekanand College kolhapur,(Autonomus)  
Department Of Statistics**

List of projects undertaken by students in the academic years 2021-22

Sr. No	Name	Roll No	Project Name	Project
1	Khot Kishor Vijay	7915	"Effect of increased screen time (mobile/laptop/pc) in under graduate students during lockdown	Ms.V.V.Pawar
2	Shidvankar Siraj Yasin	7930		
3	Jitkar Siddhesh Raghunath	7911		
4	Kamble Ashwini Mohan	7913	"Analysis of customers behavior towards Online shopping (During covid Pandemic)"	Mr. Ajit Pawr
5	Kamble Ashlesha Ramesh	7912		
6	Gurav Pooja Dhanaji	7905	"Statistical analysis of diabetic patients in Kolhapur city"	Ms.P.C.Patil
7	Jadhav Aakansha Chandrakant	7907		
8	Powar Mrunali Ramchandra	7927		
9	Ramchandani Khushi Deepak	7929		
10	Shinde Sejal Sudhir	7931		
11	Solase Sakshi Subhash	7932	"Statistical analysis of use of digital payment in Kolhapur city"	Ms.M.B.Lohar
12	Shraddha Dinkar Jadhav	7908		
13	Pranali Ravikant Kolekar	7917		
14	Jisna Anoop Mathew	7922		
15	Akanksha Nilesh Mugdar	7925		
16	Rutuja Anant Patil	7926	" Impact of online teaching on graduation students"	Mr. A. B. Bhosale
17	Santosh A Gurav	7906		
18	Yogiraj R Killedar	7916		
19	Kedar S Kumthekar	7919		
20	Siddesh R Lohar	7920		
21	Uditanshu S Prabhavale	7928	"A study of future of Electric vehicles (Evs)"	Ms. Ashiyana Makandar
22	Sammed M Barwade	7902		
23	Amey B Jagadale	7909		
24	Vedant C Kamble	7914		
25	Shivam N Jawale	7910		
26	Pranav A More	7923	Impact of "Swachh bharat abhiyan" in rural area	Mr. Ajit Pawr
27	Sawapnil V Deshmukh	7903		
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31	Shweta Rahul Mudrale	7924		
32	Lalita Ramdas Koli	7918		

*V. Pawar*  
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**Department of Statistics  
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SHRI SWAMI VIVEKANAND SHIKSHAN SANSTHA'S  
VIVEKANAND COLLEGE, KOLHAPUR

**DEPARTMENT OF STATISTICS**

2021-2022

**Project Report on**

**“STATISTICAL STUDY OF IMPACT OF ONLINE  
TEACHING ON GRADUATE STUDENTS”**



## CERTIFICATE

This is to certify that,

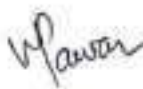
Sr. No.	Name	Roll No.
1	SANTOSH A GURAV	7906
2	YOGIRAJ R KILLEDAR	7916
3	KEDAR S KUMTHEKAR	7919
4	SIDDESH R LOHAR	7920
5	UDITANSHU S PRABHAVALA	7928

Have satisfactorily carried out the required project entitled "STATISTICAL STUDY OF IMPACT OF ONLINE TEACHING ON GRADUATION STUDENTS" as a skill enhancement course. This project represents their bonafide work in the year 2021-2022.

Date: 30/05/2022

  
Teacher Incharge.

(Bhosale A. B.)

  
Head of Department  
Head  
Department of Statistics  
Vivekanand College, Kolhapur  
(Autonomous)

## **ACKNOWLEDGEMENT**

We take great pleasure in submitting this project report on “**IMPACT OF ONLINE TEACHING ON GRADUATE STUDENT**”. It is our foremost duty to express our deep sense of gratitude and respect to the supervisor **Asst. Prof. A.B. BHOSALE** for their up-lifting tendency and inspiring us for making of this project work complete and successful. We are indebted to the library personal for offering all the help in completing the project work. Last but not the least we are thankful to our colleagues and those helped us directly or indirectly throughout this project work.

Sincerely,

Project Team

## **DECLARATION**

We undersigned, hereby declare that the project report entitled “**Impact of online teaching on graduation students by Statistical Method**” Written and submitted to **Vivekanand college, Kolhapur** partial fulfilment of B.Sc. III(Statistics) under the guidance of **Asst.Prof.A.B.Bhosale Sir** are our original work. The empirical results in this project are based on the data collected by ourselves.

We understand that any copying is liable to be published as the authorities deem fit.

**Date:**

**Place: Kolhapur**

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- 3) **MR. KEDAR SANJAY KUMATHEKAR**
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## **INTRODUCTION**



The reason for this investigation was to lead an online study as respective instructors and understudy's perception and experience identified with online classes. Conveyance of classes with the assistance of online mixed mode has been a new adjustment brought out by the instruction framework in Kolhapur District. The wake of the current COVID - 19 condition. Subsequently, this review portrays the college students studying at graduation level.

The study involving 297 undergraduate students of colleges around Kolhapur city. Online review framework was utilized with the end goal of information gathering since the corona virus outbreak, online classes have become the corner stone of modern higher education. While most universities, colleges or other educational institutions have made the complete transition to online teaching, teachers are still struggling with ways to engage students online.

During pandemic situations, studies were run online by the colleges and universities, but the situation for the students as well as for the teachers was new & undeveloped. So, the setups for the online learning were weak that caused various problems for students as well as for teachers. Such as network problems, lack of discipline, lack of concentration, lack of interaction between students and teachers and etc.

So, we are setting up a survey for getting the view of students on online education system as well as on offline education system. By taking some number of questions regarding their education systems run by colleges.

## OBJECTIVES

- **To study that, which instrument is mostly used by students for online study**
- **To study which method is suitable for students Online V/s Offline (Faculty wise).**
- **To study which teaching method is better for knowledge evaluation (Area Wise).**
- **To check whether, online learning is better for future for students.**
- **To check the dependency of starting online education in urban and rural area, before and after pandemic situation**
- **To check whether there is any network problem faced by students in urban and rural area.**
- **To check whether, students buy new accessories for online study.** .

## **METHODOLOGY**

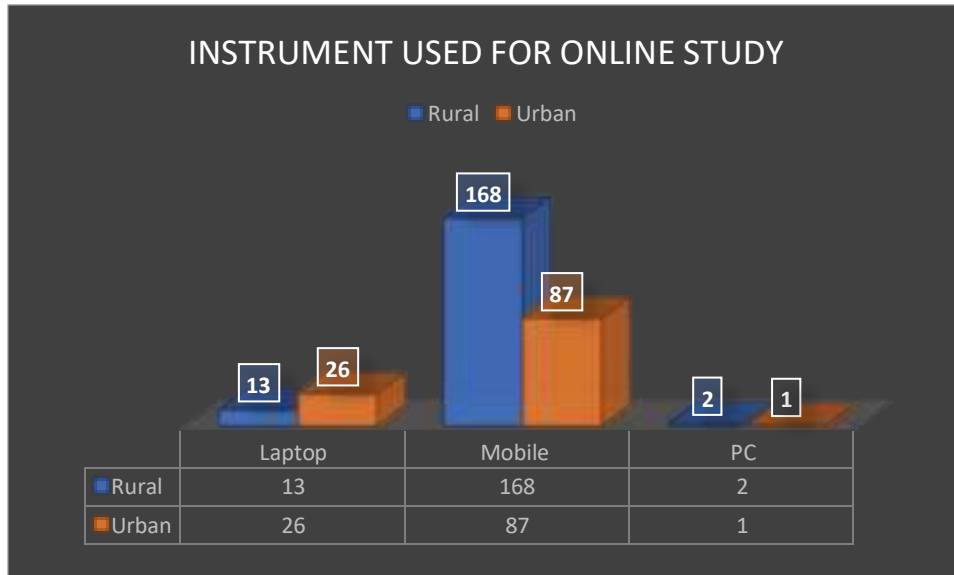
We carried out the questionnaire survey as from 26<sup>th</sup> of February until 10<sup>th</sup> of May 2022.

The questionnaires were distributed among 297 students all of them did it on google form as of online survey, the questionnaire was distributed among the students around Kolhapur city studying at graduation level.

For our project, first we created a set of questions and created a google form of it. We have collected data using Simple random sampling without replacement. And we send it to many students through WhatsApp, telegram, Instagram, mail, messages & we also had live interaction with students to collect the data. And we also set a data limit, after reaching the limit / requirement of data we stopped data collection. After data collection we have taken data from google form to excel sheet, and in excel for representation of data we used pivot table and for conclusion we use statistical tools & various test.

## GRAPHICAL REPRESENTATION

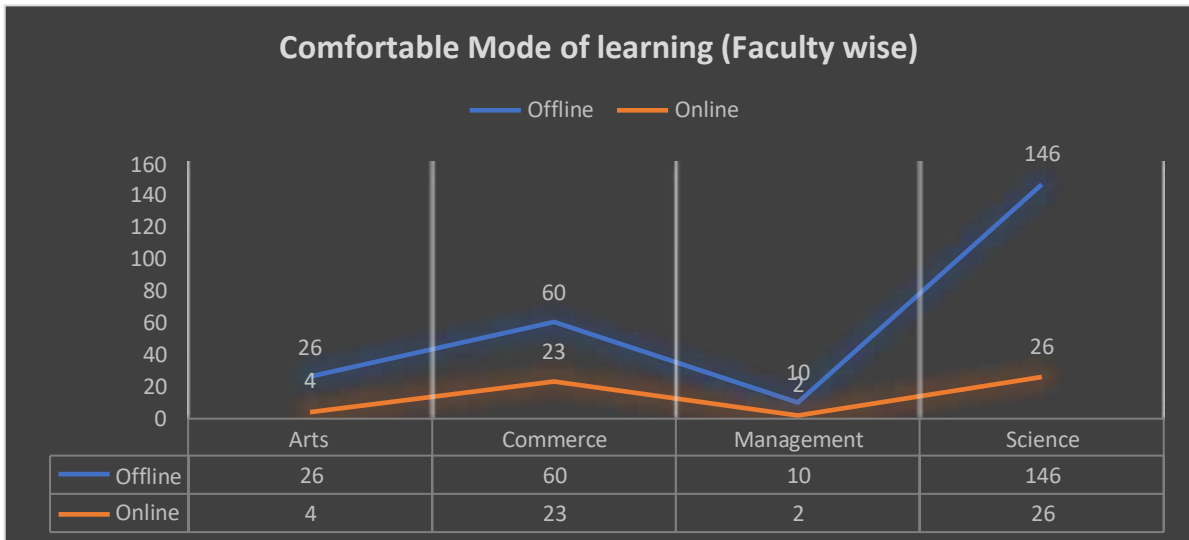
1. Bar graph showing count of various instruments used for online lecture compared with area.



**Conclusion:** From the Bar graph we conclude that most of the students use mobiles for online study as compare to laptop & PC.

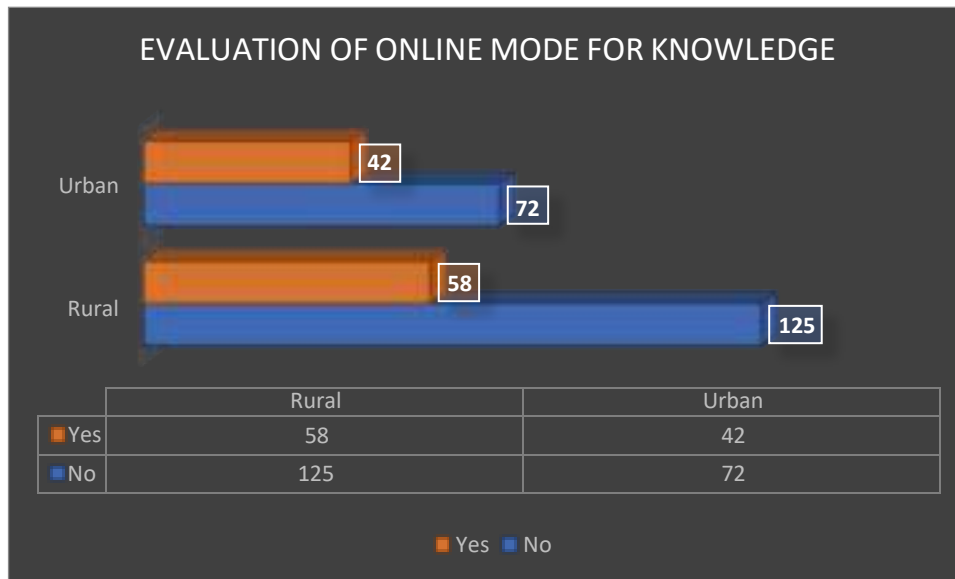


## 2. Bargraph showing which mode of learning is comfortable (Faculty wise).



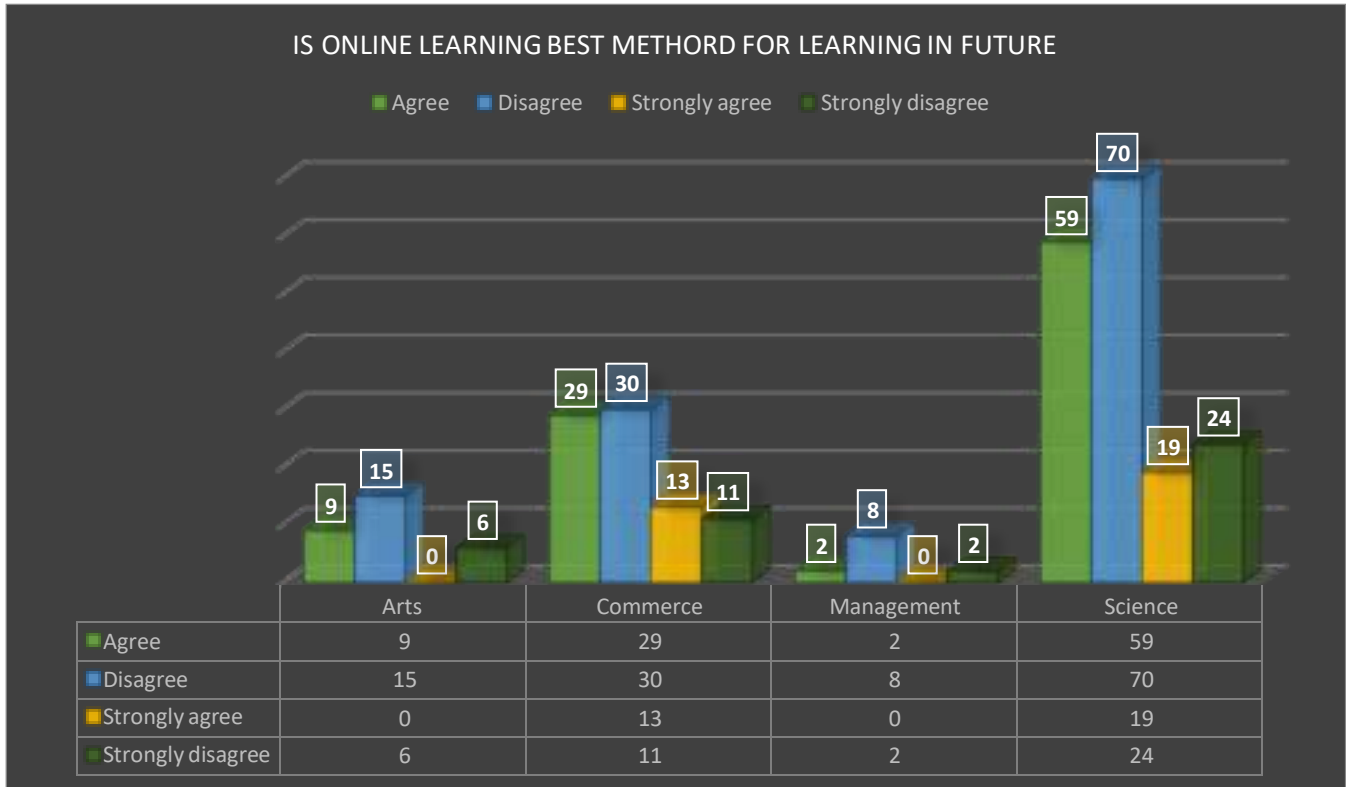
**Conclusion:** Offline mode is more comfortable for students

### 3. Bar graph showing that online evaluation mode is best for knowledge evaluation



**Conclusion:** From above graph both areas students said that the method of online teaching is not good for knowledge evaluation.

#### 4. Bar graph showing that is online mode better for learning in future (Faculty wise)



**Conclusion: We conclude that most of the faculty students disagree with method of online learning in future .**

## STATISTICAL ANALYSIS

### 1. Chi square test of attributes in case of 2\*2 contingency table

#### Hypothesis:

H<sub>0</sub>: There is no significant difference between urban and rural area, before and after pandemic for online study.

H<sub>1</sub>: There is significant difference between urban and rural area, before and after pandemic for online study.

$\alpha$ =Level of significance=5%

#### Formula :

$$\chi^2 = \frac{N(ad-bc)^2}{(a+b)(a+c)(c+b)(b+d)} \sim \chi_{d.f}^2$$

Table:

Area Period	Rural	Urban	Total
After	132	94	226
Before	51	20	71
Total	183	114	N=297



Here,

a= No of students starting online study after pandemic = 226

b=No of students starting online study before pandemic = 71

c=No of students starting online study in rural area = 183

d=No of students starting online study in urban area = 114

N=Populationsize=297

$$x^2 = 7.25868$$

$$\text{Critical value} = \chi^2_{1,0.05} = 3.841$$

$$P \text{ value} = 0.007056$$

The result is significant at  $p < 0.05$

i.e chi-square calculated is less than chi-square tabulated at 1 d.f. at 5% level of significance.

Then we accept  $H_0$

**Conclusion: There is dependency between urban and rural area, before and after pandemic for online study.**

## 2. Test for Proportion :

### Hypothesis:

$H_0$ : There is no significant difference in the proportion of students of rural area and urban area facing network problem

$H_1$ : There is significant difference in the proportion of students of rural area and urban area facing network problem

### For 1<sup>st</sup> Sample :

$n_1$  = no of students in rural area = 183

$x_1$  = students facing network problem in rural area = 111

$p_1$  = proportion of students facing network problems in rural area =  $x_1/n_1$

### For 2<sup>nd</sup> Sample :

$n_2$  = no of students in urban area = 114

$x_2$  = students facing network problem in urban area = 59

$p_2$  = proportion of students facing network problems in urban area =  $x_2/n_2$

By using R software

$p_1$  = 0.6065574

$p_2$  = 0.5175439

$p_1 > p_2$

**Conclusion :** By proportion test we conclude that students in rural area mostly face network problem than students in urban area

### 3) Exploratory analysis

Q). Would you buy new accessories for online studies ?

#### Hypothesis:

H<sub>0</sub>: There is no significant difference between proportion of electric accessories for study during pandemic.

H<sub>1</sub>: There is significant difference between proportion of electric accessories for study during pandemic.

#### Observation table

No buying new accessories	Frequency	Probability
No	140	0.4714
Yes	157	0.5286
<b>Total</b>	<b>297</b>	<b>1</b>

We assume that  $p_0=0.5$

Using test statistic

$$|Z| = \left| \frac{P - P_0}{\sqrt{\frac{P_0 Q_0}{n}}} \right|$$

$$|z| = 0.9872$$

$$\frac{z_{\alpha}}{2} = 1.96$$

P value is 0.323545

The result is not significant at  $p < 0.05$

∴ There is no significant difference between proportion of electric accessories for study during pandemic.

**Conclusion:** From above test, we conclude that students buy new accessories for online study.

## **CONCLUSION**

- .1.We conclude that most of the students use mobiles for online study as compare to laptop & PC.**
- 2.Offline mode is more comfortable for students**
- 3.We conclude that both areas students said that the method of online teaching is not good for knowledge evaluation**
- 4.We conclude that most of the faculty students disagree with method of online learning in future**
- 5.There is dependency between urban and rural area, before and after pandemic for online study.**
- 6.By proportion test we conclude that students in rural area mostly face network problem than students in urban area**
- 7.From above test, we conclude that students buy new accessories for online study.**

**Therefore, we conclude that offline learning is better than online learning**



## **BIBLIOGRAPHY**

### **Method of data collection:**

For the project work we have collected primary data from the students of different or various streams (Arts, Commerce, Science)

### **Statistical tools used:**

Graphical representation

Theory of attributes

Testing of hypothesis

### **Software used:**

MS-EXCEL

R-Software

### **References books used:**

R for everyone by Jared. P. Lander

Introduction of R by Ross Ihaka & Robert Gentleman

Fundamental of mathematical Statistics by S. C. Gupta & V. K. Kapoor

Fundamental of Applied statistics

Programmed Statistics by B. L. Agarwal

Google



"Education for Knowledge, Science, and Culture"

- Shikshanmuharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

**Vivekanand College, Kolhapur**  
**(Autonomous)**

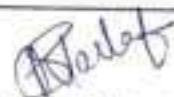


KOLHAPUR (AUTONOMOUS)

### B.Sc III Biotechnology (Optional) Student Project 2021- 22

S.N	Name of Students	Project title
1	AGALAVE PRAJAKTA V.	The antifungal activity of eugenol on various species of fungus
2	AYAREKAR TANAYA S.	"Phytochemical analysis and antimicrobial activity of <i>Trigonella foenum-graecum</i> and <i>Piper nigrum</i> "
3	DAVARI SIDHI	Phytochemical analysis and antimicrobial activity of <i>Artemisia Pallens (Davana)</i>
4	KHARADE KSHITIJA A.	Phytochemical analysis and antimicrobial activity of <i>Spinacia "Pholeracea"</i>
5	KOLEKAR NEHA A.	Study of phytochemical analysis of palm seeds and its antimicrobial activity
6	KURDEKAR SAKSHI K.	Phytochemical analysis and antimicrobial activity of <i>Hylocereusundatus</i> (red dragon fruit)
7	MANKAR IFAT A.	Screening of phytochemical compounds in watermelon seeds
8	MARULKAR GEETANJALI S.	Phytochemical analysis and antimicrobial activity <i>Ocimum sanctum</i>
9	NIGADE SAMRUDDHI S.	Production and analysis of Biodiesel from vegetable oil
10	PARANDE PARHINA Y.	Phytochemical analysis and antimicrobial activity of <i>Hibiscus rosa sinensis</i>

11	PATEL PRIYA S.	Edible films and coating ,fictionalization by probiotic incorporation
12	PATIL GAURI D.	"Phytochemical analysis and antimicrobial activity of <i>Schisandraceae and Laureals</i> "
13	PATIL RUTWIK S.	Bagasse production of Bioethanol
14	PATIL SHRUTIKA S.	Study of phytochemical analysis of Menthapertia
15	SANGAR SRUSHTI S.	Isolation and production of biosurfactant from <i>Bacillus subtilis</i>
16	SARDAR SAKSHI S.	Study of phytochemical analysis of pepper and its antimicrobial activity
17	SHAIKH NIMRAH S.	Ginger Beer
18	SHINDE CHAITRALI V.	Discussion on the origin of Kimchi
19	SHINDE OMKAR D.	Isolation and purification of indol acetic acid from <i>Azotobacter</i> and <i>Pseudomonas</i> spp
20	THAKARE PRATIKSHA B.	Study of phytochemical analysis of <i>Aegle marmelos</i>
21	UPADHYE ANJIRI S.	Phytochemical analysis Antimicrobial and larvicidal activity of <i>Neeem</i>
22	WADIKAR HARSHADA PRADEEP	Study of phytochemical analysis of ginger extraction and antimicrobial activity



Ms. Salma Nadaf

Head, Dept of Biotechnology Optional

Head

Department of Biotechnology (Optional)  
Vivekanand College, Kothapur (Autonomous)

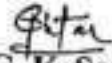
## DEPARTMENT OF ZOOLOGY

### Notice

Date: 02/09/2021

All the students of B. Sc. III (Zoology) are informed that for completion of your project for this academic year 2021-2022. Consider this student guide allotment list given below.

Sr. No	Name of Student	Guide Name	Project Title
1 2 3	Ghodake Ganesh Khot Swapnil Sanjay Mullani Arbaz	Dr. G.K. Sontakke	Anatomical and cytoarchitectural organization of Diencephalon of fish black molly
4 5 6	Magdum Pranali Manik Chougale Shivani Vilas Jagtap Shital Bharat	Dr. T.C. Gaupale	Anatomical and cytoarchitectural organization of olfactory system and olfactory bulb in fish black molly
7 8 9	Chougule Sapana Anil Jadhav Ankita Patil Aditi Atul	Dr. T.C. Gaupale	Effect of toxicant on olfactory system and its regeneration in black molly
10 11	Banadar Juveriya Liyakat Desai Shrawani Sudhakar	Ms. Najnin Patel	Toxicology studies on fishes, their exposure to pollutant, dose-dependent induced studies in the laboratory or taking directly from polluted environment
12	Heble Sanika Prashant	Ms. Najnin Patel	To study the effects of common antibiotics on intestinal microflora
13 14	Falle Nitam Jadhav Aarati	Dr. Sneha Desai	Phytochemical analysis of leaves extract of <i>Lantana camera</i> and its anti-microbial activity
15 16	Yadav Abhilasha Avinash Yadav Aditi	Dr. Sneha Desai	Phytochemical analysis of leaves <i>Akmela calva</i> and its anti-microbial activity
17 18	Kamble Amruta Suresh Shelar Samiksha Umesh	Dr. Tejashri Patil	Effect of <i>Vitex nidungo</i> on larval protein concentration of <i>Earias vittella</i>
19 20	Yevaluje Swapnali Madhukar Patil Rajvardhini Jaysing	Dr. Tejashri Patil	Effect of <i>Vitex nidungo</i> on larval carbohydrate concentration of <i>Earias vittella</i>
21 22	D'souza Priya Motes Jadhav Shila Thavaru	Ms. Yogita Pujari	Feed formulation for buffalo
23 24	Fakir Juveriya Dastgir Mullani Saima Dastagir	Ms. Yogita Pujari	Feed formulation for goat
25	Kalantre Neha Namdev	Ms. Kranti Kamble	Diversity of spiders
26 27	Kalkutaki Vishal Babasaheb Kawthekar Safia Mohammed Rafiq	Ms. Kranti Kamble	Hydrobiology study

  
**Dr. G. K. Sontakke**  
 Head,  
 Department of Zoology  
 Vivekanand College,  
 Kolhapur (Autonomous)



**A PROJECT REPORT ON:**

***“Study of carbohydrates and separation of carbohydrates from  
larvae of Earias vittella”***

**SUBMITTED TO:**

**DEPARTMENT OF ZOOLOGY**

**VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)**



**(स्वायत्त) कोल्हापूर**

**IN THE PARTIAL FULFILLMENT OF BACHELOR OF SCIENCE IN  
ZOOLOGY**

**IN THE YEAR: 2021-2022**

**NAME- Ms. Anruta S. Kamble**

**NAME- Ms. Samiksha U. Shelar**

**CLASS B. Sc. III**

**UNDER THE GUIDANCE OF**

**Dr. Tejashri C. Patil**

**Assistant Professor,**

**Vivekanand College, Kolhapur (Autonomous)**



## DECLARATION

We the undersigned students, declare that the project entitled Study of carbohydrates and separation of carbohydrates from larvae of *Earias vittella* is submitted by us under the supervision of Dr. Tejashri C. Patil, Assistant Professor, Department of Zoology, Vivekanand College, Kolhapur (Autonomous).

It is our original work. The empirical findings in this project are based on the data collected by us and it is authenticable to the best of our knowledge. The presented matter is not copied from any other source.

Place: Kolhapur

Date: 29/05/2022

A handwritten signature in black ink, appearing to read 'Samiksha U. Shelar', is written above the printed name.

(Ms. Samiksha U. Shelar)

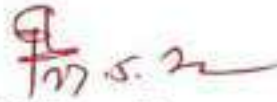
# CERTIFICATE

This is to certify that the project entitled, "Study of carbohydrates and separation of carbohydrates from larvae of *Earias vittella* " being submitted herewith for the Degree of **Bachelors of Zoology** to the Department of Zoology Vivekanand college, Kolhapur (Autonomous) Affiliated to Shivaji University, Kolhapur, under the faculty of Science is the result of the original work completed by **Ms. Samiksha U. Shelar** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project has not formed earlier.

Place: Kolhapur

Date: 29/05/2022

  
Project Supervisor  
(Dr. T. C. Patil)

  
Dr. G. K. Sontakke  
Head,  
Department of Zoology  
Vivekanand College,  
Kolhapur (Autonomous)

  
Examiner



## ACKNOWLEDGEMENT

I wish to express my deepest sense of gratitude to my project supervisor **Dr. Tejashri C. Patil**, for his/ her continuous help and valuable guidance during the entire period of my Project work. It is a genuine pleasure to express my deep sense of thanks to **Dr. G. K. Sontakke** Head, Department of Zoology, Vivekanand College Kolhapur (Autonomous) for administrative help and encouragement during the Project work. I express my profound thanks to **Dr. R. R. Kumbhar** Principal, Vivekanand College Kolhapur (Autonomous) for his constant support and inspiration.

I am also thankful to other faculties of Department of Zoology who have directly or indirectly guided and helped me in the Project work.

I am also thankful to non-teaching staff for their constant co-operation during project work.

Ms. Samiksha U. Shelar



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## Introduction:

Spotted bollworm is most important pest of okra (Ambegoakar and Bilpate, 1981). The *E. vittella* has fore wings pale white and in the middle of which wide wedge shaped parallel green stripes are present and hind wings are milky white in colour. Cocoons are brown in colour bluntly round and boat shaped. Caterpillars are long, stout, spindle shaped and the eggs are spherical, light bluish in colour (Butani and Jotwani, 1984). The Spotted bollworm *E. vittella* was first time recorded from Sudan, larvae collected in November, 1986 from okra fruits in Gezira region (Capizzi, 1986). *E. vittella* along with *E. insulana* are broadly dispersed to Indo-Pakistan, North Africa and some other nations of globe. They can survive all over the year on various food plants in different climatic conditions (Arif and Attique, 1990). The average duration of life cycle of *E. vittella* varies from 31-49 days. Life cycle of *E. vittella* reveals period of maturation of eggs, development of larva and pupa ranges from; 1-5, 6-26 and 5-14 days respectively. Longevity of male and female adult was ranges between 8 and 30 days (Roqaya, 2000). *Earias species* are mostly found in tropical and subtropical parts of world such as Palearctic, Ethiopian, Australian and Oriental region (Arora *et al.*, 2006). *Earias vittella* is most serious pest as it takes greater influence by directly affecting younger pods (Papal and Baroda, 2009). In Pakistan the *E. vittella* which commonly called spotted bollworm is a severe insect pest of okra (Ahmad and Aric, 2009). The maximum reproduction rate of *E. vittella* was found to be 185.27 and the inherent rate for natural growth ranges between 0.16 to 0.17 females per day on okra pods (Pradesh *et al.*, 2011). The percentage of development of spotted bollworm is high at 35 °C temperatures while low development rate on 27 °C temperatures and maximum mortality observed during eggs and first instars development (Shah *et al.*, 2014).

## Host Range:

Host plants have greater impact on egg laying, fertility, growing period and longevity of adults of *E. vittella* (Khan and Rao, 1960). The okra, *Abelmoschus esculentus* seeds proved to be nutritionally the most superior host plants related to the perception of pest proliferation. It was maximum (39.39 days) on cotton flowers and minimum (31.51 days) on okra, *A. esculentus* seeds (Ambegoakar and Bilpate, 1981). The influence of various food plantlets along the reproductive rate

of *E. vittella*, under laboratory conditions revealed that okra was most suitable plant in terms of development growth and reproduction (Tripathi and Singh, 1990). *E. vittella* is very serious polyphagous insect pest on many economic crop plants of malvaceae family. *E. vittella* apart from cotton feeds on okra and other malvaceous plants like *Hibiscus cannabinus* (L.). Larval period of *E. vittella* was recorded 9.16 and 9.6 days on okra and cotton plants respectively. The maximum number of eggs (277 eggs /female) lay by female moth fed on okra (Syed *et al.*, 2011).

#### **Damage symptoms:**

*Earias vittella* larvae damages host plant by boring the hole into tender terminal shoots in the vegetative stage of and flower buds, flower and young fruit formation stage. The damaged shoot, drop, wither and dry up.

The infested fruits present a deformed appearance become unfit for consumption.

Bore holes and plugged with excreta.

#### **Life cycle Of *Earias vittella***

##### **Description of Insect stages:**

Eggs are spherical bluish green. Sculptured and less than 0.5 mm in diameter, eggs are laid singly on most part of cotton Plant (flower buds, Bolls, Peduncles and bracteoles); the favored region being young Sheets

##### **Larva:**

Full grown larva is about 1-3-1.8 cm long. Stout and spindle Shaped bearing a number of long setae on each segment. Last two throated and all abdominal segments bears two pairs of fleshy tubercles, one of which is dorsal and the other lateral larva is light brown tinged with grey to green pale along the mid dorsal line with dark spot at the base of tubercles of the thoracic segments (aria a *E. Insulana* is generally lighter in colour, the pattern being grey & yellows than brown and deep grange In *E. vittella* larval tubercles are much less prominent especially in the abdomen.

##### **Pupa:**

Pupation is in a boat shaped tough Silken Cocoon That is dirty, white to brownish in Colour pups are found on plants or on fallen buds and bolls.





Fig: Larvae of *Earias vittella*



Fig: Pupa of *Earias vittella*

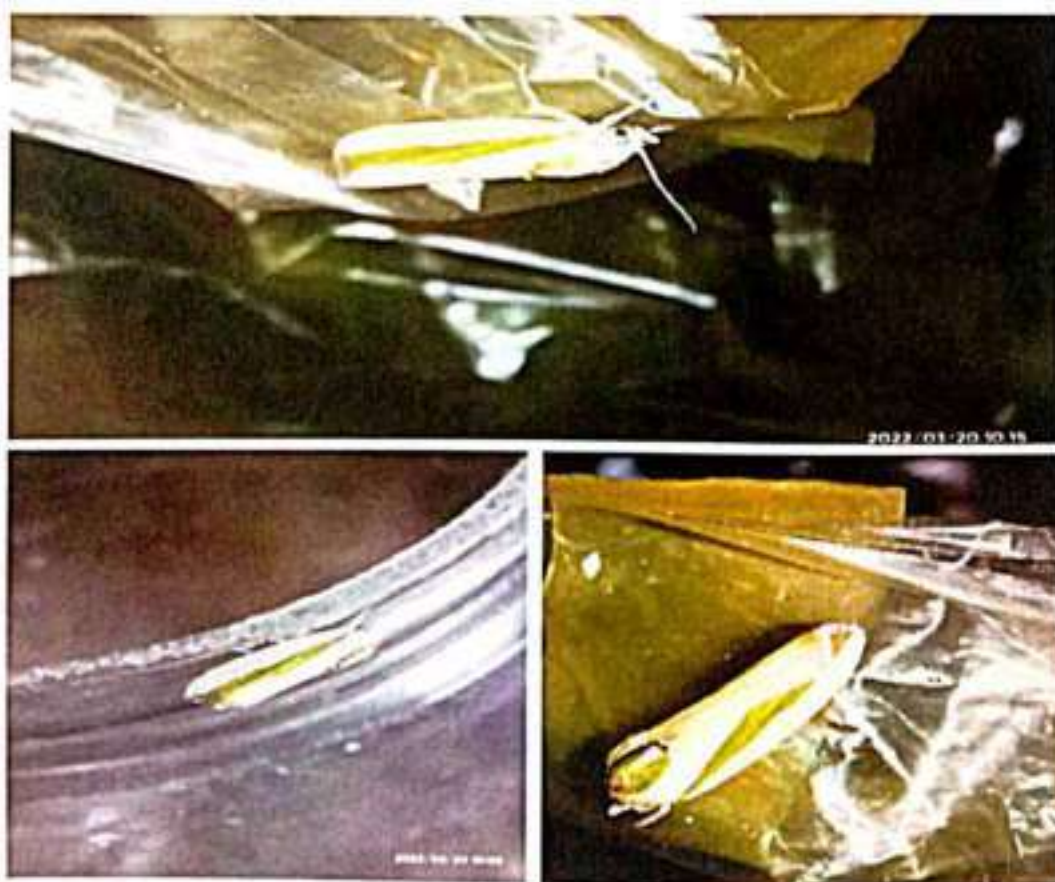


Fig: Adults of *Earias vittella*



**Adults:**

The adult of *Earias vittella* are off-white with a green or brown stripe along the middle of each forewing, and a green thorax. The green colour is inclined to fade to brown in older specimen (Roqaya, 2000)

**Okra:**

Okra, *Abelmoschus esculentus*, known in mainly countries as ladies finger, It is a flowering plant in the mallow family. It is edible green seed pods are food. Okra originated from the Abyssinian center, an area that includes Ethiopia. The plant is in tropical, warm and temperate regions. E. g. India, Bangladesh, N. America, It is an annual plant that grows to a height of 2-8 ft. (0.6-2.4). The okra is fruit pods are picked for cooking, canning and freezing when they are young and tender. Raw okra is 90% water, 2% protein, 7% carbohydrates and contains negligible fat. In a 100 gram reference amount, raw okra is a rich of dietary fiber, vitamin C and Vitamin K.

**Chromatography****Paper Chromatography:**

Paper Chromatography is an analytical method. Used to separate coloured chemicals or substances, it is now primarily used as a teaching tool, having been replaced in the laboratory by other chromatographic methods such as thin layer chromatography (TLC). A paper chromatography variant, two dimensional chromatography involves using two Solvents and rotating the paper goes in between this. It is useful for separating complex mixtures of compounds having similar polarity for example, amino acids. The setup has three components. The mobile phase is a solution that travels up the stationary phase is a due to capillary action the mobile phase is generally a mixture of non-polar organic solvent, while the stationary phase is polar inorganic solvent water. Here paper is used to support the stationary phase water polar water molecules are held inside the void space of the cellulose network of the host paper the difference between 1 and paper chromatography is that the stationary phase in the is layer of adsorbent (usually silica, Gel, or aluminum oxide), and the stationary phase in paper chromatography is less absorbent paper. (Block, *et al.*, 1955)

**Principle:**

The basic principle involved in a paper chromatography is partition in which the various components get distributed or partitioned between liquid phases. It involves use of aqueous solvent held in pores of filter paper which acts as stationary phase whereas mobile phase travels over the paper. Due to the differences in their affinity towards water ( in stationary phase ) and mobile phases solvent, the compounds in the mixture get separated on the basis of principle of adsorption between solid and liquid phases , whereas solid surface of paper serves as stationary phase and mobile phase is a liquid solvent . Although the main working principle of paper chromatography is partitioning this is employed in many pharmaceutical application.

**Types:****Descending:**

Development of the chromatogram is done by allowing the solvent to travel down the paper.

**Ascending:**

Here the solvent travels up the chromatographic paper. Both descending and ascending paper chromatography are used for the separation of organic and inorganic substances. The sample and solvent move upward

**Ascending- descending:**

This is the hybrid of both of the above techniques. The upper part of the ascending chromatography can be folded over a rod in order to allow the paper to become descending after crossing the rod

**Two-dimensional:**

In this technique a square or rectangular paper is used. Here the sample is applied to one of the corners and development is performed at a right angle to the direction of the first run.

**RF value, solutes and solvent:**

The retention factor (Rf) may be defined as the ratio of the distance travelled by the solute to the distance travelled by the solvent. It is used in chromatography to quantify the amount of retardation of a sample in a stationary phase relative to a mobile phase. Rf values are usually expressed as a fraction of two decimal places



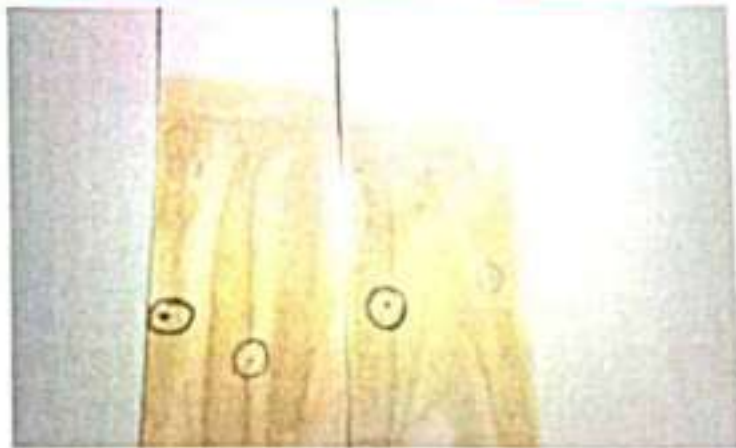


Fig: Carbohydrates and chromatography

- If Rf value of a solution is zero, the solute remains in the stationary phase and thus it is immobile.
- If Rf value = 1 then the solute has no affinity for the stationary phase and travels with the solvent front (Block, *et al.*, 1955)

### Objectives:

1. To study the Life cycle of *Earias vittella*.
2. To study the carbohydrates from larvae of *Earias vittella*
3. To separate carbohydrates from larvae of *Earias vittella*

### Materials and Methods:

#### Materials:

#### Glasswares and equipment:

Beaker, Pipette, Measuring cylinder, Petri dish, Spray bottle, Chromatography jar, Mortar pestle, Test tube, Stand, Centrifuge, Spectrophotometer, Whitman's filter Paper

#### Chemical Reagent

Anthrone Method: Anthrone reagent- dissolves 2g of Anthrone in 1 liter of conc.  $H_2SO_4$ . Standard glucose solution- 200 $\mu$ g glucose/ ml of distilled water, stock solution, 2.5 N HCl

**Chromatography reagent:** - N-Butanol, acetic acid, water (4:5:1)

**Spraying reagent:** Sodium bicarbonate, potassium permanganate (1% potassium permanganate in 2% of sodium carbonate)

#### Method:

##### 1. Insect Rearing:

Rearing insect started by collecting the larva of *Earias vittella* from infested pods. Infested okra pods collected from local okra farm and nearby markets. The larvae from infested pod placed into fresh okra pods and pods placed in plastic jars to study the lifecycle. The pods replaced daily till pupa formation. The Pupae shifted to another plastic jar until adult emergence the emerged adults Shifted to another container and nourished with 10 % sugar solution. The okra pods provided for oviposition and pods replaced regularly after observation of eggs. (Al-Mehmmady, 2000).



## 2. Chromatography:

The chromatography performed on whatman filter paper, the mark of 1.5 cm drawn on filter paper. Then the spot marked on whatman filter paper, after marking the spot with the help of capillary the drop of monosaccharides and disaccharides placed on spot then dried the spotted filter paper with the help of lamp. The whatman filter paper placed inside the chamber to solvent run. After running solvent on filter paper we take the paper from the chamber and then dried with the help of lamp. After drying of whatman filter paper the spraying reagent sprayed on spotted filter paper. After spraying and drying of filter paper we found a various colours of spots of amino acid on filter paper. Then, RF value calculated by formula

$$R_f = \text{Distance travelled by the components} / \text{Distance travelled by solvent}$$

## 3. Carbohydrate estimation by Anthrone Method

### Principle:

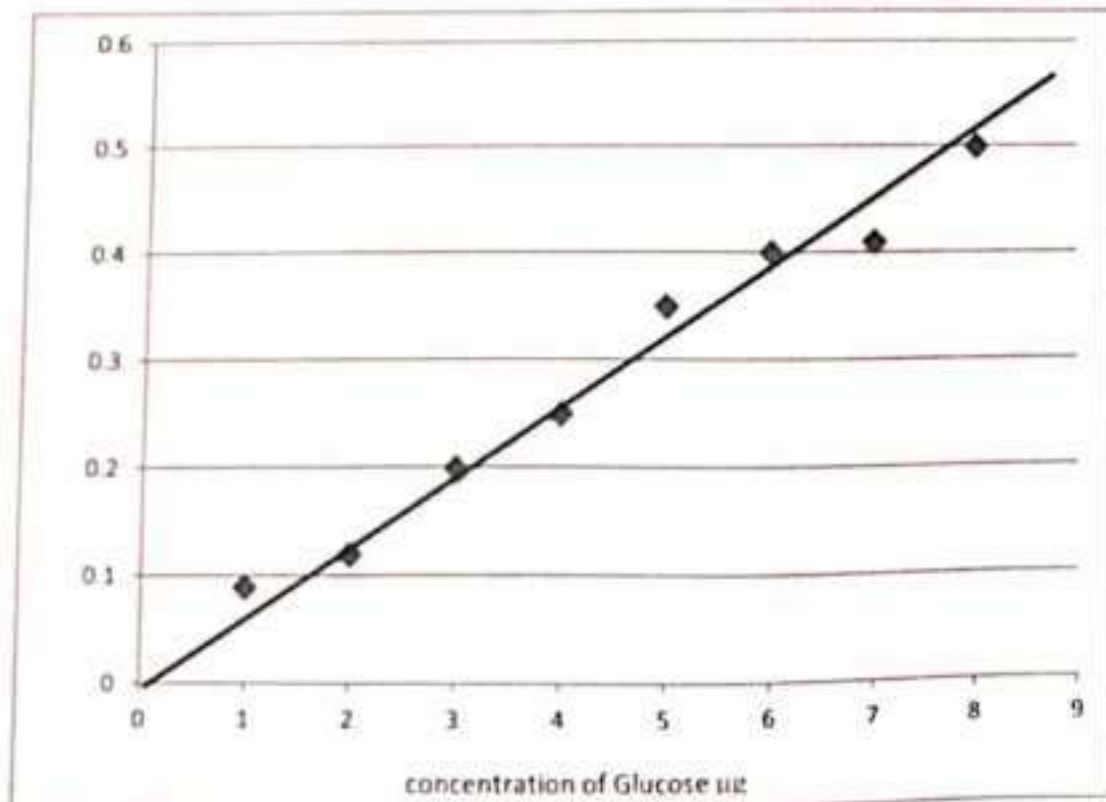
Anthrone method is a rapid and convenient method for the estimation of carbohydrate. Carbohydrates are dehydrated with concentrated  $H_2SO_4$  to form "furfural" which Condenses with Anthrone to form a green colour complex which can be measured by using spectrophotometrically at 630nm. Anthrone reacts with dextrans, monosaccharides, disaccharides, polysaccharides, Starch, gums and glycosides.

### Procedure:

1. The extract of the *Earias vittella* prepared in 2.5 N HCl.
2. The *Earias vittella* hydrolyzed by mixing 2.5N HCl and keeping it in water bath for 100°C for 3 hours.
3. The hydrolyzed samples centrifuged at 8000 rpm for 10 minutes.
4. The supernatant collected and used as extract (unknown).
5. The 0.2 ml of extract in each test tube.
6. Then in clean glass tube Pipetted out 50  $\mu$ l, 100  $\mu$ l, 150  $\mu$ l, 200  $\mu$ l, and 250  $\mu$ l of the Standard solution and made up the total volume to 1ml with addition of distilled water.
7. 4 ml of Anthrone reagent added in each test tube it forms green colour, test tubes incubated in water bath for 11 minutes and then tubes cooled to room temperature.

8. prepare a blank with 1ml of distilled water and 4ml of Anthrone reagent
9. Then Optical Density measured at 620 nm in spectrometer.

Sr. No	Glucose		Distilled Water ( $\mu\text{L}$ )	Anthrone reagent (mL)	Incubation for $100^{\circ}\text{C}$ for 10 minutes	Absorbance 620nm
	( $\mu\text{L}$ )	( $\mu\text{g}$ )				
1.	-	-	1000	4		0.00
2.	50	10	950	4		0.09
3.	100	20	900	4		0.12
4.	200	40	800	4		0.20
5.	300	60	700	4		0.25
6.	400	80	600	4		0.35
7.	500	100	500	4		0.40
8.	750	150	250	4	0.41	
9.	1000	200	---	4	0.50	



**Observations and results:**

**Table: 2**

Sr. No	Sample	Anthrone reagent	Incubation	Absorbance at 620nm (OD)	Mean OD
1	0.2	4		0.57	0.54
2	0.2	4		0.56	
3	0.2	4		0.51	

**Table: 3**

Sr. No.	Distance travelled by solute	Distance travelled by solvent	Rf value
1	4.3	8	0.53
2	4.3	9	0.48
3	6.3	10.7	0.58
4	5.7	10.9	0.52





**Fig: Carbohydrates Estimation**



**Result:**

1. From standard graph the amount of glucose present in unknown sample of larvae is 85µg glucose/mg of tissue
2. The RF values of unknown sample matches with the standard values of glucose, lactose, Fructose, Maltose
3. Hence from observation the tissue sample contain glucose, lactose, Fructose, Maltose

**Conclusion:**

Carbohydrates are essential for the construction the developing insects play essential role in insect life; insects obtain carbohydrates from their food. Carbohydrates are principal component for animal for energy generation. By studying the amount carbohydrates of larval tissue and biochemistry of insect will further help in insect pest management for formulation of pesticides.

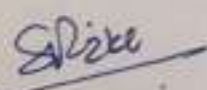
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**VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)**  
**DEPARTMENT OF CHEMISTRY**  
**B.Sc.III Project Report YEAR 2021-22**

Sr.No.	Name of the Guide	Title Name	Name of the Student
1	Dr.Mrs. S. D. Shirke	"Isolation & Estimation of Caffeine in tea leaves"	1. Miss. Koli Nandini Siddhartshankar 2. Mr. Patil Abhijit Hindurao 3. Miss. Patil Sarika Sahadev
2	Dr.Mrs. S. D. Shirke	"Detection of pesticides & insecticides from different fruits & vegetables"	1.Ms.Sakshi Mohan Ambekar 2.Ms.Aaliya Altaf Mujawar 3.Ms. Srushti Babaso Sumare
3	Dr. A.S. Tapase	"Analysis of milk and their products at shri warana dudh utpadak prakriya sang. Ltd. Waranangar"	1.Mr. Karankumar Ashok Shinde 2.Mr.Prasad Shahaji Ghorpade 3.Sandesh Santosh Kadam
4	Miss. P. A. Gholap	"Chemical contents in cold drink"	1.Mr. Prathamesh Rajesh Patil 2.Mr. Satyajeet Sudhakar Patane 3.Mr. Sahil Bhauso Shirkande 4.Mr. Prat hamesh Prakash Mengane 5. Mr. Sanket Ravindra Chougule
5	Miss. Mrunal M. Patil	"Measuring the Amount of Acetic Acid in Vinegar"	1.Miss. Priti Vikas Sarvagode 2.Miss. Sakshi Sajay Ubare
6	Dr.Mrs. S. D. Shirke	"Drug analysis -Estimation of Calcium"	1.Mr. Manoj S, Kamble 2.Mr. Nikhil J. Jadhav 3.Mr. Koustubh A. Vanjari 4.Mr. Manish K. Sawant 5.Mr. Harshvardhan D, Deshmukh
7	Dr. K. A. Undale	"Anions and Cations Present in Different samples of toothpaste"	1.Aditya Tatyaso Patil 2.Siddheshwar Shivaji Dooke 3.Rohit Namdev Jadhav 4.Rasika Anil Kamble
8	Miss. Ruikar Poonam	"Extraction and TLC (Thin layer Chromatography characterization of nicotine from tobacco leaf"	1.Mr.Akash Shamrao Kenjalekar 2.Mr. Pavan Dhanaji Patil 3.Miss. Ishwari Sadashiv Mahadik 4.Miss, Bhakti Prakash Pasare 5.Miss. Akanksha Vijay Talkar
9	Mr. A.T.Mane	"Analysis of Chocolate"	1.Mr. Swanand B. Powar 2.Mr. Omkar P. Patil 3.Mr. Raj R. Tahsildar

  
 Dr. S. D. Shirke  
**Head**  
 Dept. of Chemistry  
 Vivekanand College Kolhapur





**KOLHAPUR**

NAAC - Re Accredited "A"  
CGPA = 3.52

**A**

**Project Report**

**Entitled**

**"Multi-Component Synthesis of Benzo[b]pyrans"**

Submitted to,

**PG Department of**

**Vivekanand College, Kolhapur**

For the partial fulfilment of practical course for  
the award of M.Sc. degree in Organic Chemistry

By

Mr. Sandesh R. Mane	1021	Mr. Sourabh A. Bhaskar	1005
Ms. Shivani A. Gaikwad	1011	Ms. Sonali S. Babar	1002
Ms. Nikita K. Salokhe	1040	Mr. Rahul B. Patil	1031

**Project Guide**

**Dr. K. A. Undale**

Department of Chemistry  
Vivekanand College, Kolhapur

**2021 - 2022**



# CERTIFICATE

This is to certify that Mr. Sandesh R. Mane , Mr. Sourabh A. Bhaskar, Ms. Shivani A. Gaikwad, Ms. Sonali S. Babar, Ms. Nikita K. Salokhe, Mr. Rahul B. Patil of the Class M. Sc. II has satisfactorily completed the project work on the title "**Multi-Component Synthesis of Benzo[b]pyrans**" as a partial fulfilment of the practical course for the award of the M. Sc. Degree in Organic Chemistry by Shivaji University, Kolhapur.

Place: Kolhapur

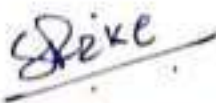
Date:



Dr. K. A. Undale

Co-ordinator,

M. Sc. Organic Chemistry,  
Vivekanand College, Kolhapur



Dr. Mrs. S. D. Shirke

Head

Dept. of Chemistry  
Vivekanand College Kolhapur



Examiners

## ACKNOWLEDGEMENT

*We wish to express our deep sense of gratitude towards Dr. K. A. Undale, Assistant Professor, Department Of Chemistry, Vivekanand College, Kolhapur for his valuable guidance to complete this project within time.*

*It is our proud privilege to express the sense of gratitude and sincere thanks to Principal Dr..R .R. Kumbhar & Dr. Mrs. S. D. Shirke, Head, Department of Chemistry, Vivekanand College, Kolhapur for providing all the available facilities of the college for completion of this project.*

*Our sincere thanks to all those who have directly or indirectly involved in this project work.*

*Mr. Sandesh R. Mane*

*Ms. Shivani A. Gaikwad*

*Ms. Nikita K. Salokhe*

*Mr. Sourabh A. Bhaskar*

*Ms. Sonali S. Babar*

*Mr. Rahul B. Patil*

## DECLARATION

It is hereby declared that the work reported in the project entitled "**Multi-Component Synthesis of Benzo[*b*]pyrans**" is completed and written by us and has not been copied from anywhere.

Place: Kolhapur

Date: / / 2022

Mr. Sandesh R. Mane	1021	Mr. Sourabh A. Bhaskar	1005
Ms. Shivani A. Gaikwad	1011	Ms. Sonali S. Babar	1002
Ms. Nikita K. Salokhe	1040	Mr. Rahul B. Patil	1031

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## ➤ Introduction

Green chemistry emphasizes the development of environmentally benign chemical processes and technologies<sup>1</sup>. The use of water as a solvent for organic transformations offers several "green chemistry" benefits<sup>2</sup>. In many reactions, such as the Diels-Alder cycloaddition<sup>3</sup>, significant rate enhancements are observed in water compared to organic solvents. This acceleration has been attributed to many factors, including the hydrophobic effect<sup>4</sup>, enhanced hydrogen bonding in the transition state<sup>5</sup> and the high cohesive energy density of water (550.2 cal.mL<sup>-1</sup> at 25 °C)<sup>6</sup>. The Diels-Alder reaction is also known for its negative activation volume, owing to a transition state that is more compact than reactants. Reactions with negative activation volumes are accelerated at high pressure and with nonpolar reactants, in water<sup>7</sup>.

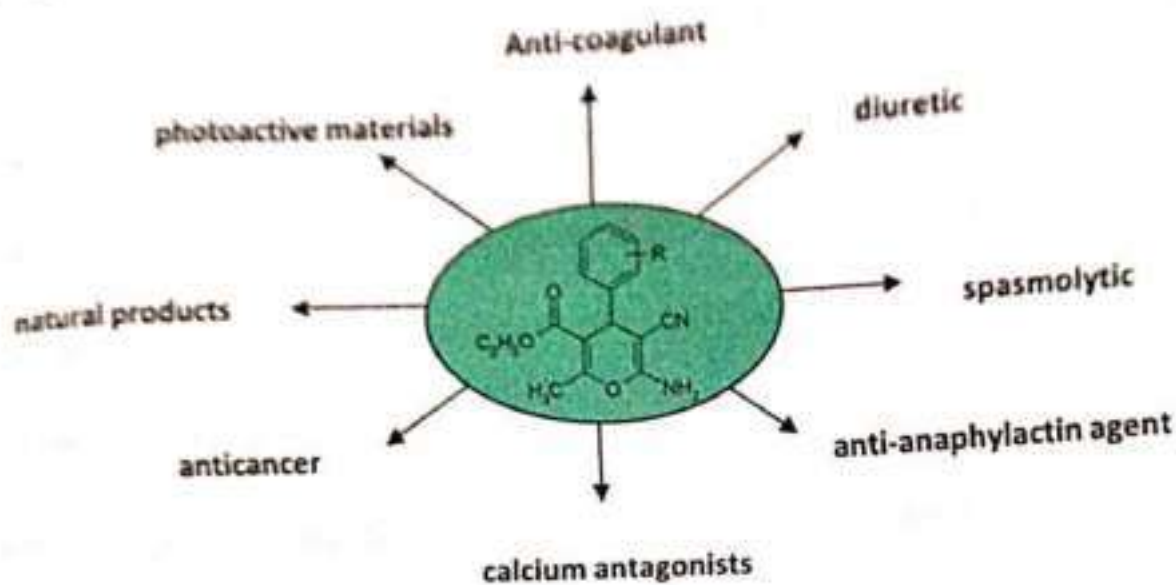
Chemistry of heterocycles has been of importance in understanding the formation of bioactive molecules as well as having industrial applications especially in pharmaceuticals. The majority of pharmaceuticals and biologically active agrochemicals contain heterocyclic moieties with addition of countless additives and modifiers. The applications ranging from cosmetics, reprography, information storage and plastics heavily depend upon the heterocyclic residues. One of the striking structural features inherent to heterocycles, which is continued to be exploited to a great advantage by the drug industry, lies in their ability to manifest substituent around a core scaffold in well defined three-dimensional representations. Based upon these

considerations in recent years, a family of new heterocyclic scaffolds has come into existence having wide range of applications such as switching on / off devices, photo catalysis, etc. 4H-pyrans [Fig. 1], synthesized in this work are fused six membered heterocyclic compounds which have attracted the attention of both synthetic chemists as well as pharmacists due to plethora of applications possible for their derivatives.

The multicomponent reactions important in combinatorial chemistry<sup>8</sup> are predicted to exhibit negative activation volumes owing to the condensation of several molecules into a single reactive intermediate and product<sup>9</sup>. Thus, not only does the use of water as solvent permit multicomponent reactions to be conducted rapidly, the products are often insoluble, facilitating their ready isolation. This method permits rapid syntheses of compound libraries. 4H-Pyrans and their derivatives are an important class of bioactive molecules in the field of drug and pharmaceuticals<sup>10</sup>. These compounds are used as anti-coagulants, anticancer agents, spasmolytics, anti-anaphylactics<sup>11,12</sup>. 2-amino-4H-pyran derivatives often used in cosmetic and pigments and utilized as potentially biodegradable agrochemicals<sup>13-15</sup>. Moreover, these compounds can be used in various applications as cognitive enhancer for the treatment of neuro degenerative diseases, including Alzheimer's disease, as well as for the treatment of schizophrenia and myoclonus<sup>16,17</sup>. 4H-Pyran derivatives are also



potential calcium channel antagonists<sup>18</sup> which are structurally similar to biologically active 1,4-dihydropyridines (1,4-DHPs).



### ➤ Methods of synthesis of pyrans

Generally, 2-amino-4-aryl-3-cyano-4*H*-pyrans were synthesized by the cyclization of arylidenemalononitriles and active methylene compounds in the presence of organic bases such as piperidine<sup>19</sup>, pyridine<sup>20</sup>, triethylamine<sup>21,22</sup>. Most of these methods involve use of volatile solvents and require longer reaction time (~ 12 h) and difficult to recover catalyst. Moreover, the cyclization of arylidenemalononitriles and ethyl acetoacetate in the presence of triethylbenzylammonium chloride, as phase-transfer catalysts, in an aqueous medium has been reported<sup>23</sup>. Recently, one-pot synthesis of these compounds

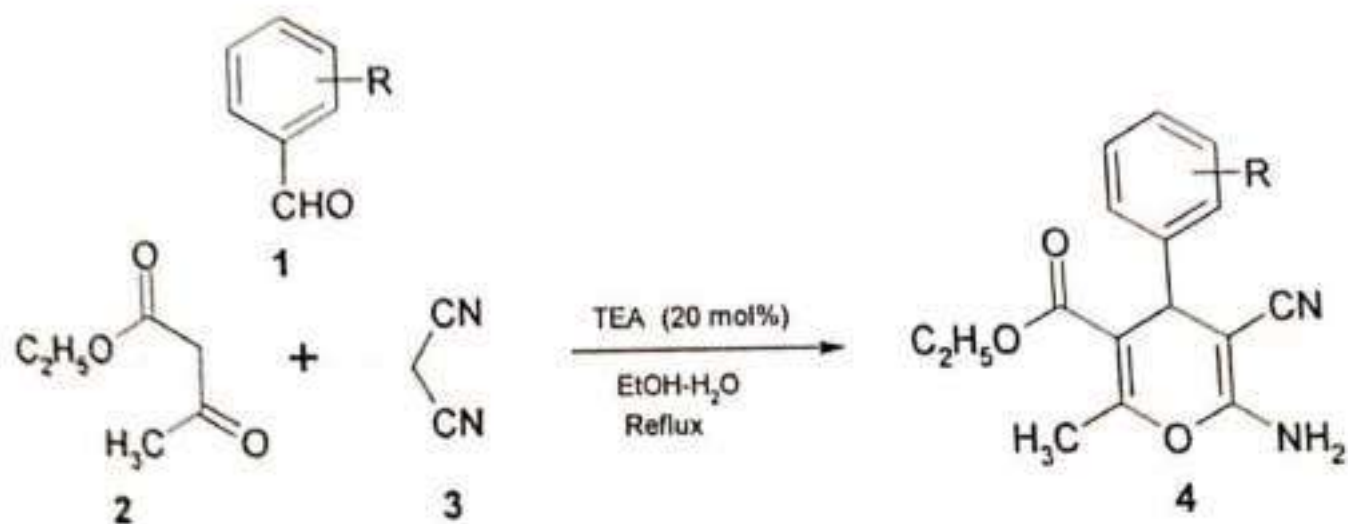
has been reported using Mg/La mixed oxide<sup>24</sup>, MgO<sup>25,26</sup> and tetramethylguanidine<sup>27</sup> as basic catalyst.

Although these methods are quite satisfactory, many of them employ considerable amounts of hazardous organic solvents, which are not environmentally friendly, for carrying out the reactions and/or for extraction and purification (column chromatography). Furthermore, these methods are not suitable in terms of the recent trends in process chemistry, because of the use of metallic catalysts. Therefore, a method using a nonmetallic catalyst is desirable. Organo-catalysts have gained interesting attraction in recent years due to economic and environmental considerations. These catalysts are generally inexpensive and easily available. They can conveniently be handled and removed from the reaction mixture, thus making the experimental procedure simple and eco-friendly. The leading contenders for environmentally acceptable processes are supported reagents.



## ➤ Present work

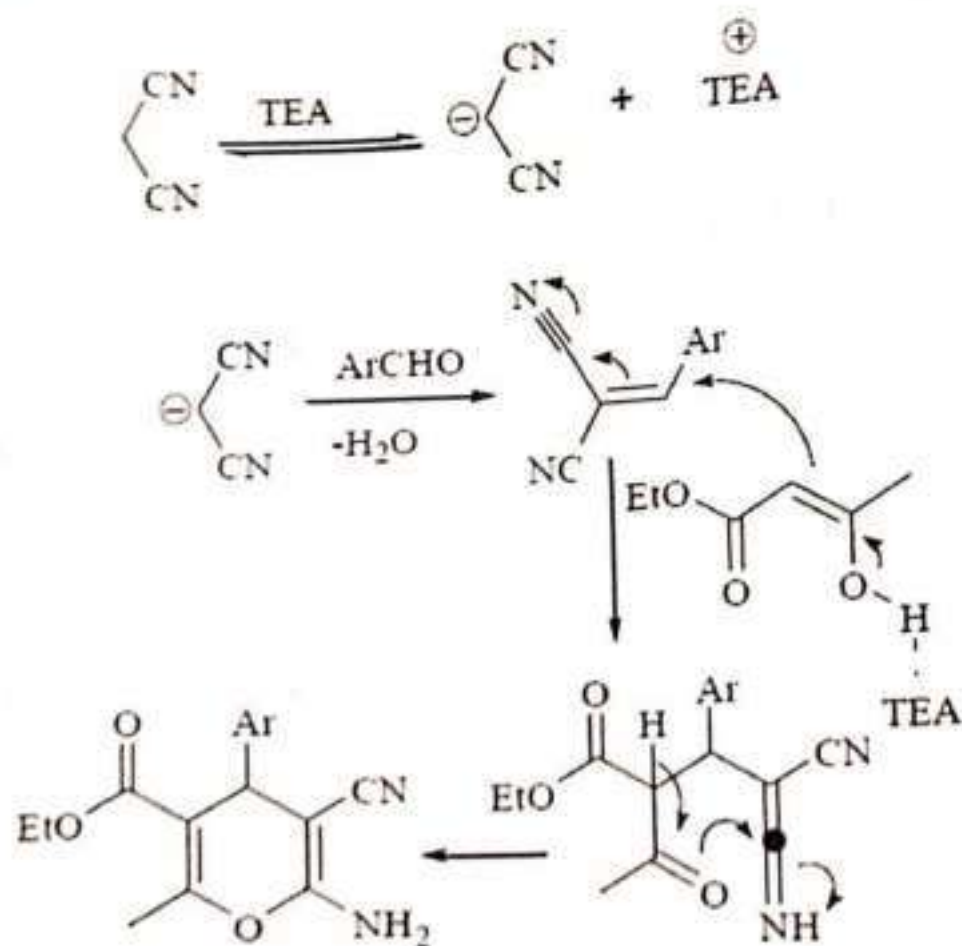
In continuation with our earlier experience with use of base catalyst in Michael addition, we envisaged that tri-ethylamine could be a suitable catalyst for the present transformation, it will form a strong co-ordinate bond with 'O' of 1,3-diketone to form its enolate ion and also it is sufficiently basic for the formation of cyanoolefin. Further subsequent Michael addition of enolate of 1,3-diketone on cyanoolefin, followed by cyclocondensation to form corresponding 2-amino-4*H*-pyran. Herein, we report three-component reaction of aromatic aldehydes, ethyl acetoacetate, and malononitrile in the presence of triethyl amine for a combinatorial synthesis of 2-amino-4*H*-pyran frame-works in aqueous-ethanol medium.



### tri-ethyl amine catalyzed multi-component synthesis of 2-amino-4*H*-pyrans

We also proposed plausible mechanism for the above synthesis, initially condensation of aromatic aldehyde with malononitrile in the presence of TEA leads to the formation of arylidenemalononitrile with the loss of a water

molecule. The nucleophilic addition of the enolizable ethylacetoacetate to arylidene malononitrile followed by intramolecular cyclization of the resulting species produce the 2-amino-4*H*-pyrans. The synthesized products are confirmed on the basis of mp, and spectral data such as NMR and IR.



### Plausible Mechanism for TEA catalyzed multicomponent synthesis of 2-amino-4*H*-pyrans

#### Results and Discussion

In order to achieve optimum conditions, we initially investigated the three-component reaction of benzaldehyde **1a** (1 mmol), malononitrile (1 mmol), and ethyl acetoacetate (1 mmol) in the presence of triethyl amine (20 mol %) in different conditions as shown in Table 1. The reaction did not proceed to

completion when water was employed as solvent. The reaction was found to proceed sluggishly both at ambient temperature and at reflux conditions and the desired product was obtained in only 45% yield after 2.5 h under reflux conditions (Table 1, entry 2). When using ethanol as solvent, the corresponding product was also obtained in low yields (Table 1, entries 3-4). Therefore, mixtures of water-ethanol were examined (Table 1, entries 5-6). Acceleration in reaction rate was observed. The best result was obtained when the reaction was carried out in water-ethanol (1:1 v/v) at reflux conditions. (Table 1, entry 6).

**Table 1: Optimization Studies: Effect of Temperature and Solvent on the Reaction**

Entry	Solvent	Temp	Time (hrs)	Yield %
1	H <sub>2</sub> O	Rt	2	20
2	H <sub>2</sub> O	Reflux	2.5	45
3	EtOH	Rt	2	53
4	EtOH	Reflux	2.5	60
5	EtOH/H <sub>2</sub> O(1:1)	Rt	2	58
6	EtOH/H <sub>2</sub> O(1:1)	Reflux	2	88

<sup>a</sup>All reactions performed with benzaldehyde (1 mmol), malononitrile (1 mmol), ethyl acetoacetate (1 mmol), and triethyl amine (20 mol %) at reflux condition. <sup>b</sup>Isolated yields after recrystallization. <sup>c</sup>The amount of solvent must be twice that of used for entry.



Along with solvent and temperature study catalyst amount is also optimized, and it was found that 20 mol % is the suitable and sufficient amount for current transformation.

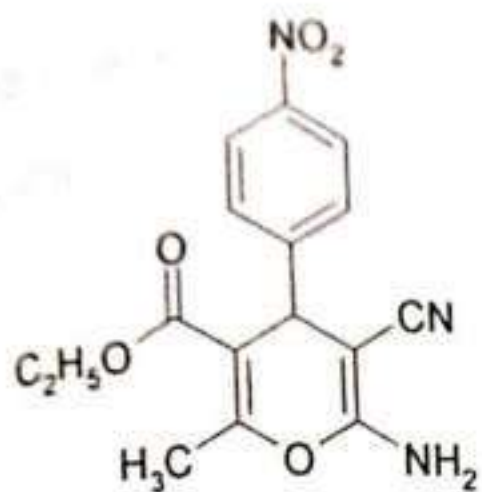
The optimized reaction conditions were then applied to a range of aldehyde substrates. Both electron-poor and electron-rich aldehydes were well tolerated. Some of the representative examples are reported in Table. 2.



Table:2 – Synthesis of 2-amino-4H-pyrans

Entry		MP (°C)	Yield(%)	Time(hrs)
4a		182	88	2.0
4b		188	85	2.15
4c		165	92	2.0
4d		140	94	2.30

4c

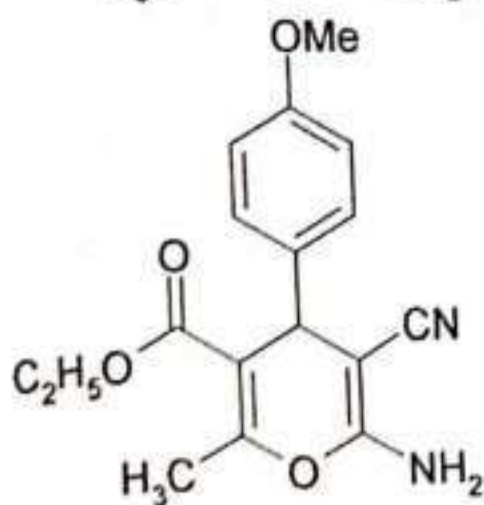


210

92

2.45

4f

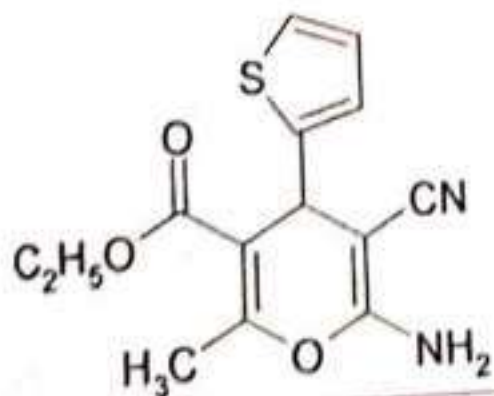


110

90

2.0

4g



235

89

2.10

### ➤ General Procedure

To a stirred mixture of aldehyde (1 mmol), malononitrile (1 mmol), methyl amine (1.3 mmol) in water-ethanol (1:1, 5 ml.) was added ethyl acetate (1 mmol) or acetylacetone. The mixture was heated at reflux temperature till the completion of reaction as indicated by TLC, after which it was cooled and the precipitated solid was filtered, washed with water and recrystallized from ethanol.

### Conclusion

We are successful in developing efficient method for multi-component synthesis of 2-amino-4//pyran at reflux temperature using tri-ethyl amine as an inexpensive catalyst. This procedure offers several advantages including mild condition, high yields, inexpensive catalyst, wide scope of substrates and operational simplicity, simple work-up, and purification of products by non-chromatographic methods, i.e. by simple recrystallization from ethanol.

### ➤ Experimental

Various aldehydes (Lancaster and Alfa-Aesar), ethyl acetate (Thomas Baker) were used as received. IR spectra were recorded on Perkin-Elmer [FT-IR-783] spectrophotometer. NMR spectra were recorded on Bruker AC (300 MHz for  $^1\text{H}$  NMR) spectrometer in  $\text{CDCl}_3$  using TMS as an internal standard and  $\delta$  values are expressed in ppm. Melting points recorded are uncorrected.

# SPECTRA





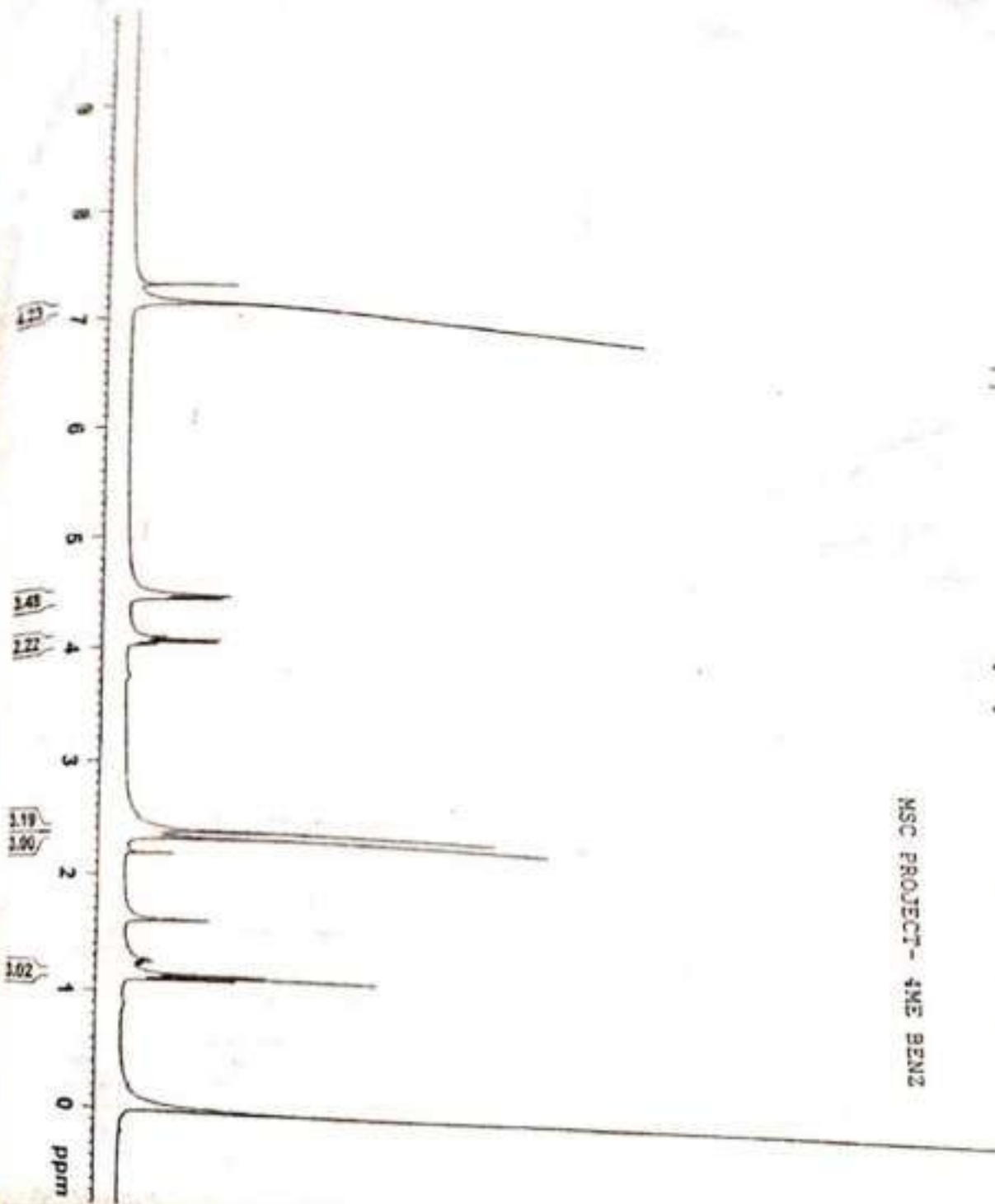
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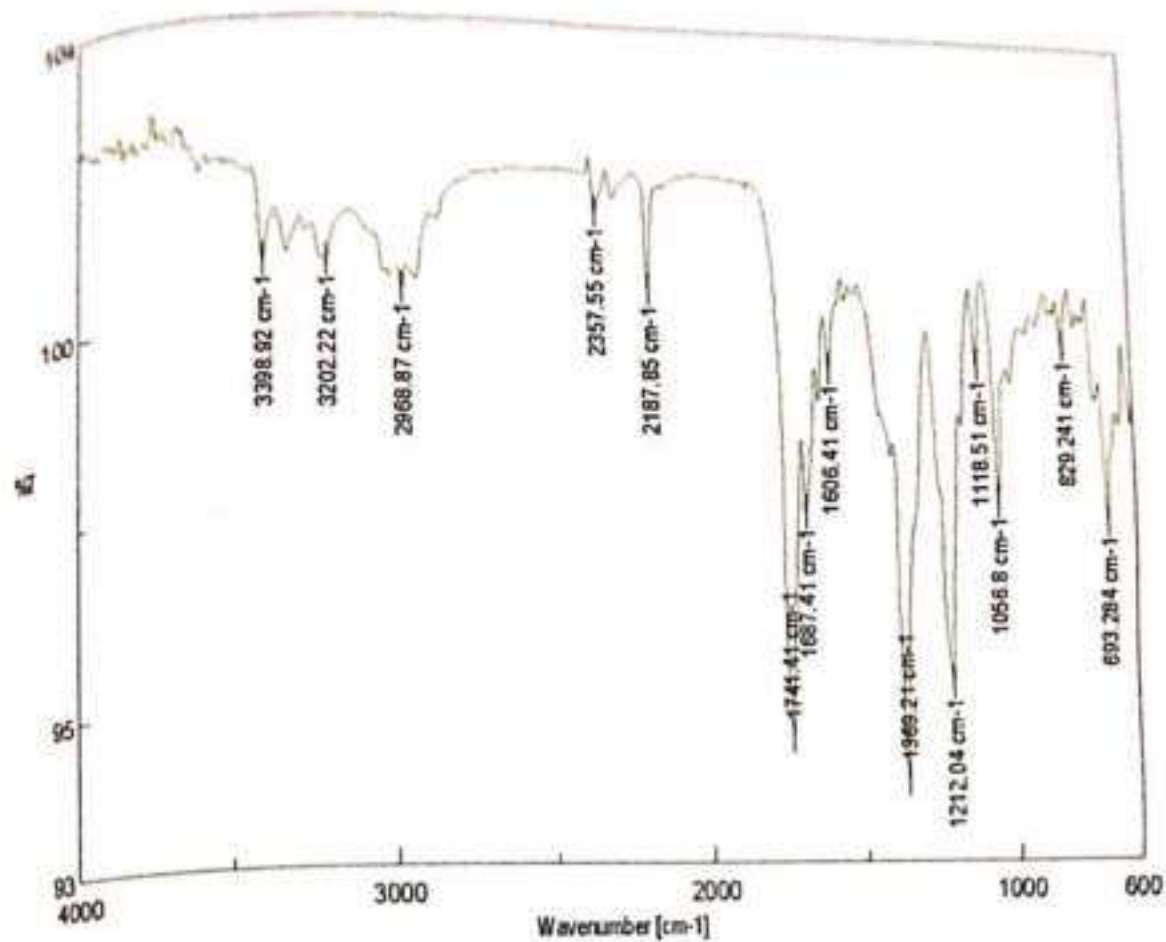
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2.322

1.616  
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 TE: 300.0 K  
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 TDO: 1.0000000 sec

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 PL1W: 10.72575474 W  
 SFO1: 300.1318534 MHz  
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 MDM: EN  
 SSB: 0  
 LB: 0.30 Hz  
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 RC: 1.00



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 Sample name  
 Comment  
 User  
 Division  
 Company

JAYSINGPUR COLLEGE, JAYSINGPUR

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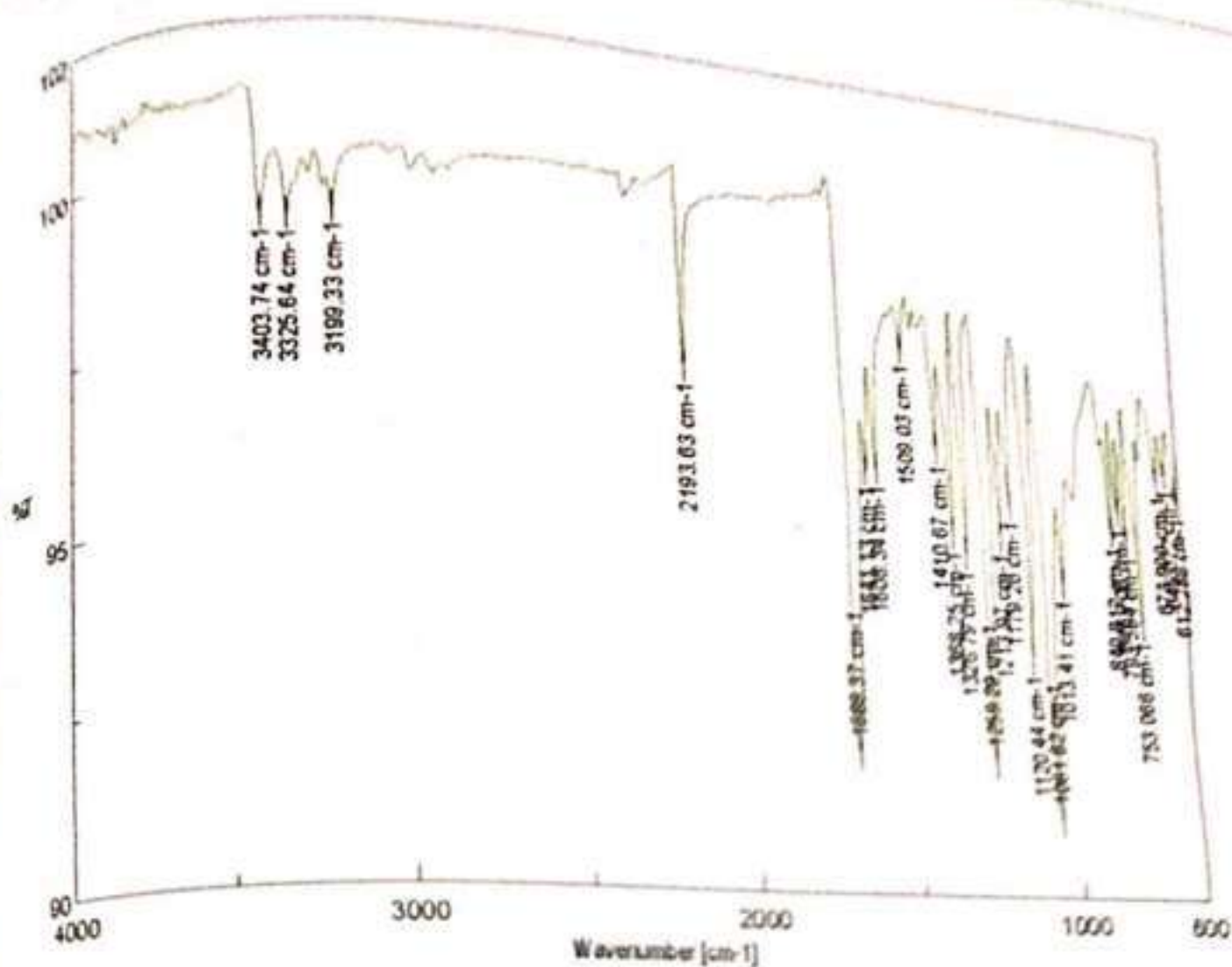
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 Aperture Auto (7.1 mm)  
 Scanning Speed Auto (2 mm/sec)  
 Filter Auto (30000 Hz)

Memory-20

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 Data interval 0.964233 cm<sup>-1</sup>  
 Data points 7729



[Comments]  
 Sample name  
 Comment  
 User  
 Division  
 Company

JAYSINGPUR COLLEGE, JAYSINGPUR

Memory-10

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 Filter Auto (30000 Hz)



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"Education for Knowledge Science and Culture"



- Dr Bapuji Salunkhe



SHRI SWAMI VIVEKANAND SHIKSHAN SANSTHA'S  
VIVEKANAND COLLEGE, KOLHAPUR, (AUTONOMOUS)

Department of Biotechnology

## Certificate

This is to certify that Mr. Kolekar Shreyas Dhananjay

Exam Number \_\_\_\_\_ has satisfactorily carried out his project report as per the syllabus prescribed by Bo'S Department of Biotechnology, Vivekanand College (Autonomous) for B.Sc- III Biotechnology (Entire). This project report represents his/her bonafied work during academic year 2021-2022.

Place: Kolhapur

Date: 26/5/22

*Pragya*  
26/5/22  
Project Guide

*Dr. Bapuji Salunkhe*  
25/5/22  
Examiner

*[Signature]*  
Head  
Department of Biotechnology (Entire)  
Vivekanand College, Kolhapur (Autonomous)



**"ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "**

## **DECLARATION**

I hereby declare that the project work entitled **"Isolation of Quercetin from Dry Scales of Onion & To study the Application of Quercetin by use of CAM assay "** submitted to the Vivekanand College, Kolhapur for the award of the degree of "Bachelor of Science in Biotechnology" is the result of bonafied work carried out by me under the guidance of Asst/Prof **Miss. Priya .D. Patil**

I further declare that the results presented here have not been the basis for the reward of any other degree.

Place :- Kolhapur

Date :- 26/5/22

S.D.K

**Mr. Kolekar Shreyas Dhananjay**



"ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "

## Acknowledgment

This project work is a successful outcome of the contribution and guidance of other person which I express my deep gratitude. I also express our thanks to **Prof. Mr. S.G. Kulkarni** Head of Department of Biotechnology, Vivekanand College, Kolhapur for availing me with the laboratory facilities to the Biotechnology Department to carry experiment work. I also express our gratitude towards **Asst/Prof. Miss P.D. Patil** my project guide for his guidance and who gave me encouragement and support throughout the course of study so that could complete my project work.

I also wish to express my gratitude to the laboratory staff for completing the project work.

  
**Mr. Kolekar Shreyas Dhananjay**

**"ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "**

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**"ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study  
the Application of Quercetin by use of CAM assay "**

# **INTRODUCTION**



## "ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "

### INTRODUCTION

#### What is Quercetin ?

- It is most dispersed and widely examined plant flavonoid found in different food source but mainly in Onion leaves.
- Quercetin has antioxidant and anti-inflammatory.

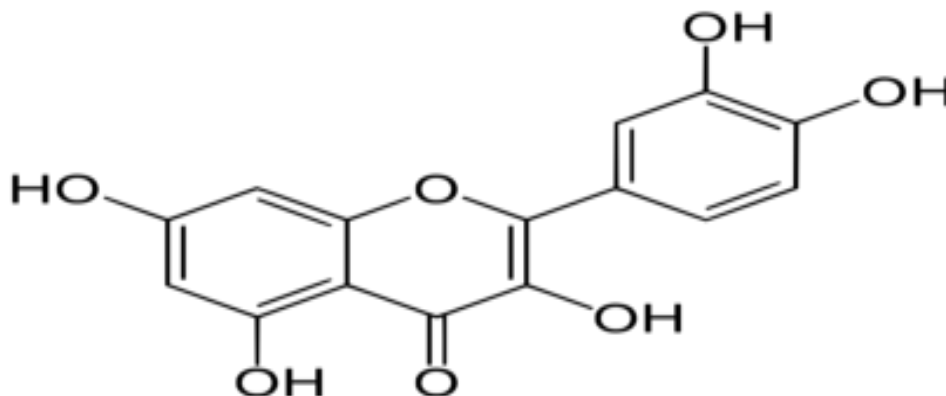
#### INTRODUCTION

- Flavonoids are part of a large group naturally occurring plant phenolics.
- They occur in plants mainly as a glycosides - conjugates of several types of aglycones (the compound remaining after the glycosyl group) with carbohydrates.
- Flavonols are flavonoids of particular importance as they have been found to possess antioxidant and free radical scavenging activity in foods .
- Among them quercetin is most widely distributed within the plant kingdom.
- Quercetin is derivative of **flavan-3,4-diols**, containing 5 hydroxyl groups.

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- Quercetin is a **dietary antioxidant** that prevents oxidation of low-density lipoproteins in vitro, and increases absorption of vitamin C .
- The quercetin works in a synergistic way with vitamin C to rebuild small blood vessels and many other structural parts of the body.
- Vegetables, fruits and beverages are the main dietary sources of flavonols, primarily as quercetin .
- The epidemiological studies have indicated that high consumption of flavonols is associated with reduced risk of cancer and coronary diseases .
- One of the major sources of flavonols in the European diet is the onion .
- Edible part of onion contain several type of quercetin glucosides, and onion leaves.
- There are hundreds of commercially available preparations containing quercetin and other bioflavonoids.
- One tablet usually contains 100 to 500 mg of quercetin, rutin, hesperedin and other flavonoids and vitamin C.
- The quercetin and other flavonoids are isolated from different plant sources: seeds, nuts, leaves and fruits. One of the best source of natural free quercetin can be dry scales of onion.

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**IUPAC name**

**2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-4H-chromen-4one**

**Introduction of CAM( chorio allantoic membrane )**

- The chicken is a well-known experimental model to study embryonic development.
- Chick embryos are readily accessible for visualization in ovo and experimental manipulation.
- Chick embryo development lasts 21 days before hatching.
- Three extra embryonic membranes are formed during development: the yolk sac membrane, the amnion, and the chorioallantoic membrane

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- (CAM). The CAM is formed on day 3–4 of incubation by the fusion of the chorion and the allantois and it consists of three layers, ectoderm (from the chorion), mesoderm, and endoderm (from the allantois). The CAM has a rich vascular system.
- By 16 days of incubation, the CAM has become so large that it covers most yolk sac, and become closely pressed against the shell membrane
- This enables it to act as a gas-exchange organ receiving oxygen and eliminating carbon dioxide through the pores in the shell. The surface area of the CAM increases from approximately 6cm<sup>2</sup> at day 6 to 65cm<sup>2</sup> by day14.



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## **Review of literature**

## "ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "

### Review of literature

- **METHOD OF QUERCETIN EXTRACTION FROM DRY SCALES OF ONION**
- **Marcin HORBOWICZ Research Institute of Vegetable Crops**

Dry outer scales of brown onion is one of the richest known sources of free quercetin. In other plant tissues quercetin is present as glycosides only. Dry scales of onion is a waste during production and processing of onion. A method of extraction of quercetin from powdered onion scales was elaborated. During research effects of time, temperature and solvents used for extraction process were studied. It was found that 4-hours extraction by shaking with cold ethyl acetate is effective, fast and simple method of isolation crude quercetin from dry scales of onion. Obtained product is a powder of yellow colour, and its purity is equal 70%. Hot extraction improved slightly yield of the process, but product purity was lower. Extraction with ethanol containing various concentration of water caused that crude quercetin is oily and contain up to 78% of contaminants. Such product needs further purification.

- **ANALYTICAL CHARACTERIZATION OF QUERCETINS ISOLATED FROM LEAVES OF**

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### **Psidium guajava L.**

Guava is a significant food crop also as restorative plant observed tropical and subtropical areas. *Psidium guajava linn.* is an individual from Myrtaceae family, which contains 133 genera and excess of 3,800 plant species. Guava is wealthy maximum of phenols, triterpenes, flavonoids, oils, saponins, lectins, vitamin-c and fiber. The leaf of guava is reach source of flavonoids specifically quercetin, kamiferol luteol. The guava is helpful to increase bowel movement is ascribed due to favonoids and fibres. The flavonoids have pharmacological activity like antibacterial, antioxidant, hepatoprotective. In isolation of quercetin separate form from leaves of *Psidium guajava l.* by using methanol and fallowed the different chemical and analytical test like Lead acetic acid derivation test, Sodium Hydroxide test and Shinoda test , thin layer chromatography mobile phase was Ethyl acetate: Formic acid: GAA: Water, and different

- **Absorption of dietary quercetin glycosides and quercetin in healthy ileostomy volunteers**

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- P C Hollman, J H de Vries, S D van Leeuwen, M J Mengelers, M B Katan *he American Journal of Clinical Nutrition*, Volume 62, Issue 6, December 1995

Quercetin is a dietary antioxidant that prevents oxidation of low-density lipoproteins in vitro. Intake of quercetin was inversely associated with coronary heart disease mortality in elderly Dutch men. However, the extent of absorption of quercetin in humans is unclear. The aim of this study was to quantify absorption of various forms of quercetin. Nine healthy ileostomy subjects were studied, to avoid losses caused by colonic bacteria. They followed a quercetin-free diet for 12 d; on days 4, 8, and 12 they received a supplement of fried onions at breakfast (rich in quercetin glucosides) equivalent to 89 mg aglycone, pure quercetin rutinoside (the major quercetin compound in tea) equivalent to 100 mg aglycone, or 100 mg pure quercetin aglycone, in random order. Subsequently, participants collected ileostomy effluent and urine for 13 h. In vitro incubations of quercetin or its glycosides with gastrointestinal fluids showed minimal degradation. Absorption of quercetin, defined as oral intake minus ileostomy excretion and corrected for 14% degradation within the ileostomy bag, was 52 +/- 15% for



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quercetin glucosides from onions, 17 +/- 15% for quercetin rutinoside, and 24 +/- 9% for quercetin aglycone. Mean excretion of quercetin or its conjugates in urine was 0.5% of the amount absorbed; quercetin excretion in urine was negatively correlated with excretion in ileostomy effluent ( $r = -0.78$ ,  $n = 27$ ). We conclude that humans absorb appreciable amounts of quercetin and that absorption is enhanced by conjugation with glucose.

- **Antioxidant and anti-inflammatory activities of quercetin and its derivative**

**Quercetin is hardly bioavailable and largely transformed to different tabolites. Although little is known about their biological activities, these metabolites are crucial for explanation of health benefits associated with quercetin dietary intake. In this study, the antioxidant and anti-inflammatory activities of six quercetin derivatives (quercetin-3-*O*-glucuronide, tamarixetin, isorhamnetin, isorhamnetin-3-*O*-glucoside, quercetin-3,4'-*O*-glucoside, quercetin-3,5,7,3',4'-pentamethylether) were**

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**compared with the activity of common onion extract as the main source of dietary quercetin and standards (butylated hydroxytoluene and aspirin). The quercetin derivatives demonstrated notable bioactivities, similar to standards and onion. Derivatization of quercetin hydroxyl groups resulted in decrease of antioxidant potency. However, the number of quercetin free hydroxyl groups was not in direct correlation with its potential to inhibit inflammatory mediators production. To conclude, quercetin derivatives present in systemic circulation after consumption of quercetin may act as potent antioxidant and anti-inflammatory agents and can contribute to Observations on the use of the avian chorioallantoic membrane (CAM) model in investigations into angiogenesis**

**Mary Richardson<sup>1</sup>, Gurmit Singh**

The chorioallantoic membrane (CAM) is widely used as a model to examine angiogenesis, and anti-angiogenesis. Its advantages over mammalian systems include low cost, and ease of preparation, as well as the absence of a

## "ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "

mature immune system. Although the use of this model presents a major opportunity to compare data generated in different laboratories, thereby expediting the evaluation of new drugs, angiogenic potential of cells and tissues, and body fluids, as well as to provide meaningful information concerning the molecular mechanisms involved, the wide range of methodologies used, especially in the quantification of the response, make any comparison essentially invalid. overall biological activity of quercetin-rich diet.

- Quercetin: potentials in the prevention and therapy of disease

### **Bischoff, Stephan C**

Quercetin is discussed since several decades as a multi potent bioflavonoid with great potential for the prevention and treatment of disease. In the current review, we present the most recent findings on quercetin with regard to the pharmacology, the in-vitro and in-vivo effects in different cell systems and animal models, and the clinical effects in humans.

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In this review, the major methodologies for all aspects of the use of the CAM in angiogenesis-related studies have been described. These include the source of the CAM, the methods for culture, and methods for evaluation of normal growth and of the response to an intervention. Methods for applying an intervention, the age for intervention and the duration of an intervention are documented. The structure and growth characteristics, the nature of possible responses to stimulation and inhibition of angiogenesis, and the complications of non-specific reactions have been examined. The need for a standardized approach to the use of the CAM model is obvious. One set of possible parameters is suggested.



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## **Aim & Objective**

**"ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "**

## **Aim & Objective:-**

### **Aim:-**

The main aim of present research was to elaborate the simple and sufficient method for **"Isolation of Quercetin from Dry Scales of Onion & To study the Application of Quercetin by use of CAM assay"**

- **Objective:-**
- **Isolation of Quercetin**
- **Characterization of Quercetin**
- **Purification of Quercetin**
- **study of application by cam assay**

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## **Requirements & Methodology**

## "ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "

### **Requirements :-**

- raw material :- Dry onion Scales, Zero days fertilized Black eggs
- Glassware's :- Funnel, Beakers, Glass rod, Measuring cylinder, Flasks, Test tubes. disc of Whatman filter
- Chemicals :- Ethyl Acetate , conc.HCL, Sodium hydroxide , lead ions , Hydrogen Sulphide , Magnesium fragments ,Dry Scales of onion.
- Equipments:- Test tube stands, Autoclave, shaker incubator , Burner.



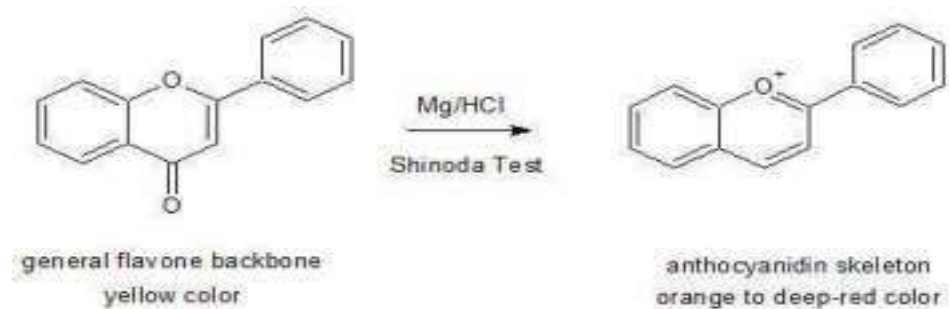
## "ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "

### Methodology

- Soaking:-  
Add crushed dry scales of onion in 250 ml flask and ethyl acetate.  
keep it for soaking for 24 hrs in shaker incubator.
  
- confirmatory test :-
  - a) Lead acetate test: Few drops of 10 percent lead acetate are added to the extract. Development of yellow colored precipitate confirms the presence of flavonoids.
  
  - b) Sodium Hydroxide test: To the extract-increasing amount of Sodium Hydroxide was added gives yellow colour, which disappeared after addition of acid.
  
  - **c) Shinoda test (Magnesium Hydrochloride reduction test):** To the test solution add few fragments of Magnesium turning and add cone. Hydrochloric acid drop wise, pink scarlet, crimson

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red or occasionally green to blue colour appears after few minutes.



➤ Microbial Test:-

preparation of plates of *Pseudomans* and *E.coli* by Seeded agar plate technique on Nutrient agar.

form 3 wells in each plate as addition of mixture 2,4,6 Micro lit and 1 control plate of each microbe. incubate at 37° for 24hrs .

➤ Zone of inhibition:-

➤ principle:-

The **(Quercetin)** diffuses from that position into the surrounding medium forming a concentration gradient as it does so. Bacteria will grow until they reach the point in the concentration gradient which

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kills them. This leads to a circular zone of no growth called the zone of inhibition.

Formation of zones in *E.coli* and *Pseudomonas*

thus Flavonoid (Quercetin) stops the microbial growth

- To study the Application of Quercetin in CAM assay Quercetin can be used as Standard chemical for studying Angiogenesis

1)Thirty five eggs were procured from the government hatchery, Kolhapur. Zero days fertilized Black eggs were used for this assay. Crude extracts were dissolved in methanol solution and vortex. The samples were prepared different concentrations of Quercetin were added drop wise (5 $\mu$ l) on disc of Whatman filter and applied on chorioalantoic membrane (CAM).

### 2) **CAM assay:**

Zero fertilized eggs were collected from hatchery and the eggs were cleaned with 70% ethanol and incubated at

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37<sup>0</sup> C with 55-60% humidity in incubator. On day 3 of incubation, a small hole was made on the outer shell and 2-3 ml albumin was removed by 4 mm gauge hypodermic needle to allow detachment of CAM development. Next, a small window was made. Through, the window of each egg, sterile filter discs containing different concentrations of crude extract the solvent methanol (Control ) and Quercetin ( Sample ) disc were implanted inside the egg on the junction of two blood vessels of the CAM subsequently under sterile conditions

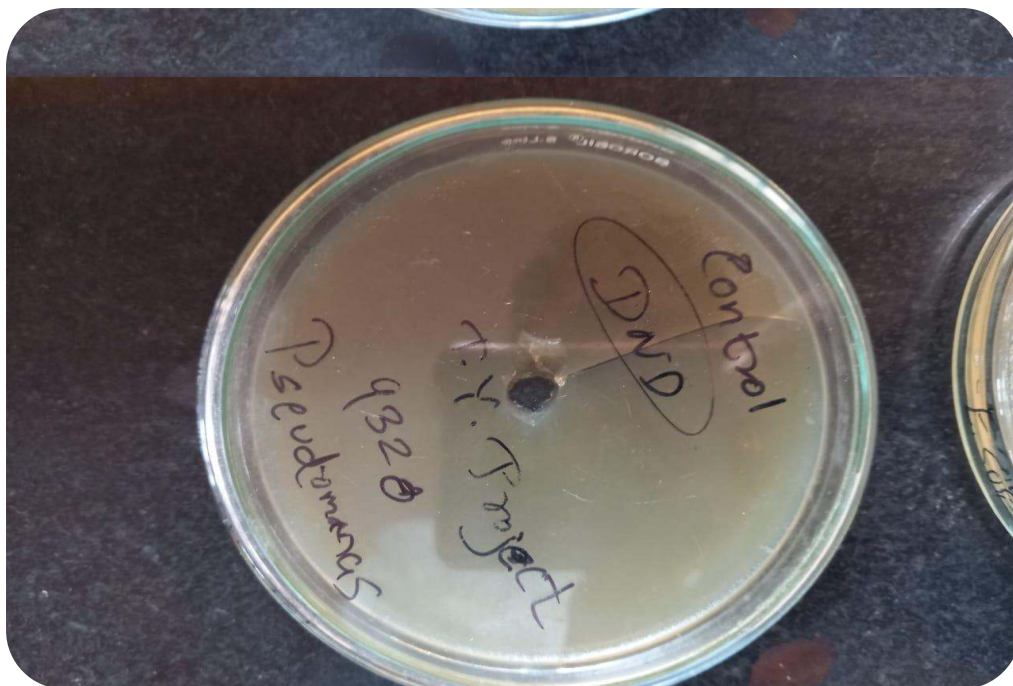
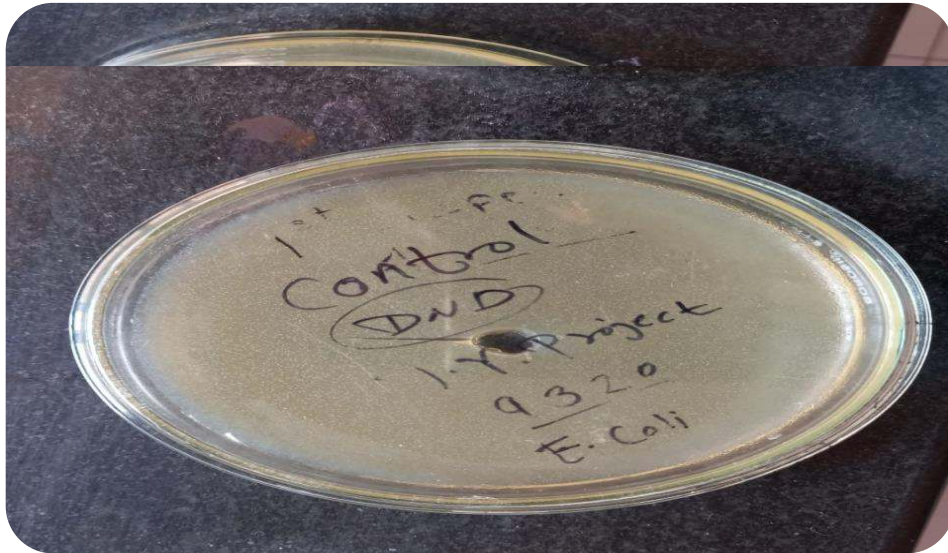


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## **RESULT**

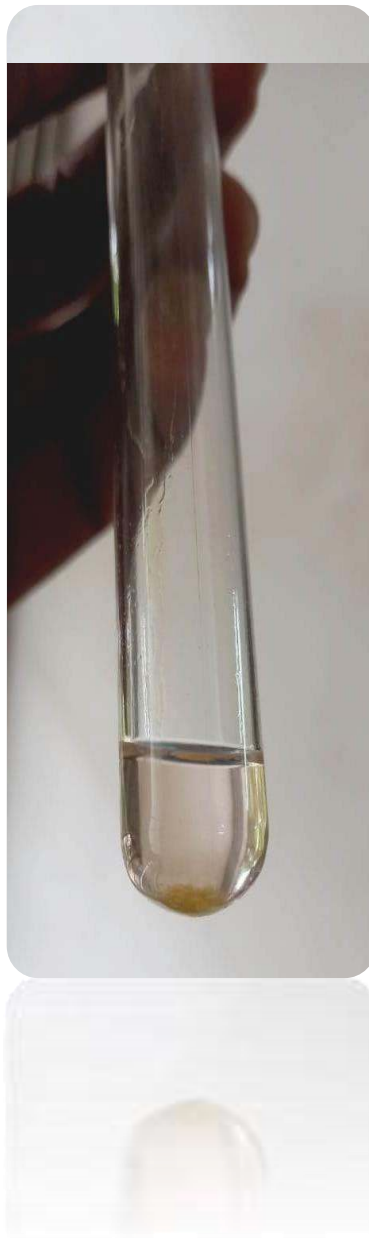
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## RESULT



**"ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "**

**Lead acetate test**



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YELLOW COLOR

**Sodium Hydroxide test**

YELLOW COLOR



COLOURLESS





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**c) Shinoda test (Magnesium Hydrochloride reduction test)**



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Control Methanol 24 hrs



incubate after 4 days



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## **CONCLUSION**

## "ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "

### **CONCLUSION**

- The quercetin(Flavanoid) was detected from dry onion scales by shaking with ethyl acetate the yield of crude product was obtained
- Confirmation of (Flavanoid) was done by Confirmatory test
- the action of quercetin as Anti-Angiogenesis was studied on Pseudomonas , E.coli and also by use of CAM assaay



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# APPENDIX

# APPENDIX

**"ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "**

**Lead acetate composition**

Hydrogen Sulphide	----	50ml
lead ions	----	0.4gm

**Magnesium reduction test**

**Pinch of Magnesium Fragment and Conc. HCL**

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# APPLICATION

## "ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "

### APPLICATION

Quercetin has antioxidant and anti-inflammatory effects that might help reduce swelling, kill [cancer](#) cells, control [blood sugar](#), and help prevent heart disease.

Quercetin can be as standard chemical for study of Anti-angiogenesis

Quercetin can be as standard chemical for study of Anti-carcinogenetic tissue

Quercetin can be as study for blood related disease.

pure form of quercetin can obtained by HPLC and IR spectroscopy



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## **REFERENCE**

**"ISOLATION OF QUERCETIN FROM DRY SCALES OF ONION & To study the Application of Quercetin by use of CAM assay "**

## REFERENCE

- PubMed
  - research gate
  - ANALYTICAL CHARACTERIZATION OF QUERCETIN ISOLATED FROM LEAVES OF Psidium guajava L.1Mr. K. G. Bhutkar, 2Dr. Rashmi Tambe
  - METHOD OF QUERCETIN EXTRACTION FROM DRY SCALES OF ONION Marcin HORBOWICZ Research Institute of Vegetable Crops
  - Safety of quercetin for clinical application (Review)Authors: Toshihiro Okamoto
- 
- WEBSITE :- [www.google.com](http://www.google.com)  
[www.wikipedia.com](http://www.wikipedia.com)

Shri Swami Vivekanand Shikshan Sanstha's  
**VIVEKANAND COLLEGE, KOLHAPUR**  
 Department of Electronics  
 B.Sc.- III, Projects List 2021-22

Sr. No.	Roll No.	Name	Project Title
1	7934	CHOUGULE SUYASH PRAVEEN	Automatic water dispenser using Arduino
2	7950	KORAVI DHIRAJ KERABA	
3	7956	PATIL NIRANJAN ANNASAHEB	
4	7935	DABADE SHWETA SHIVAJI	Arduino based smart blind stick
5	7959	PATIL SAKSHI BABGONDA	
6	7936	GOLANDAJ MISBAH PARVEJ	
7	7942	DAVANG OMKAR TANAJI	Infra Red Burglar Alarm
8	7944	GUMANE GAURAV VISHNU	
9	7939	DHONUKSHE VINAYAK DHANAJI	Gas leakage detected by Arduino UNO
10	7946	KAMBLE AMOL BHIKAJI	
11	7954	NADAF WASIM SHAHJAN	
12	7940	DOKE VAIBHAV EKNATH	Arduino Radar for Object detection
13	7948	KHANAJ KETAN DATTATRAY	
14	7943	GOPANE SIDDHANATH CHANDRAKANT	
15	7947	KAMBLE SUBODH PRASHANT	Biometric security system using Arduino for vehical
16	7953	MANIYAR AHAMADRAZA GOUSHMODDIN	
17	7958	PATIL RUTUJA ANIL	Industry Protection system using Arduino
18	7960	PATIL VAISHNAVI YUVARAJ	
19	7964	SHEVALE SUSHMITA ANANDA	
20	7951	MALI PRAJWAL ASHOK	Home Automation using Bluetooth & Arduino
21	7952	MALI PRAJYOT SANJAY	
22	7955	PANKAR DIGVIJAY SATAPPA	
23	7937	DESAI SANDESH HARIDAS	Smart Door unlock system
24	7938	DEVADKAR BHAVESHWAR SHAMRAO	
25	7941	GANDURE MANOJ DHANAJI	
26	7962	POWAR HARSHDEEP DEEPAK	Ultrasonic Distance Meter Using Arduino
27	7965	VELHAL VYANKATESH HEMANT	



**Head**  
 Department of Electronics  
 Vivekanand College, Kolhapur.

संनमिन् नमोऽवि सुरुसंस्तुतयसाठो विरि  
गुरुभर विदिमहर्षी डो आपुनी सखु से



**KOLHAPUR**

*NAAC Re-Accredited 'A'*

**A PROJECT WORK**

**"ARDUINO RADAR FOR OBJECT DETECTION"**

*Submitted to,*

*Department of Electronics,*

**Vivekanand College, Kolhapur (Autonomous)**

*For partial fulfillment of practical course for  
the award of B.Sc. Degree in Electronics.*

*By*

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**GUIDANCE**

**Mr.P.R. Bagade**

**2021-2022**



DEPARTMENT OF *Electronics*,



KOLHAPUR

NAAC Re-Accredited 'A'

**CERTIFICATE**

This is to certify that **Mr.Keen Dattatray Khanaj,**  
**Mr.Vaibhav Eknath Doke, Mr. Siddhanath Chandrakant**  
**Gopane** the class BSc. III has satisfactorily completed the  
project work on "**ARDUINO RADAR FOR OBJECT**  
**DETECTION**" the entitled as a partial fulfillment of the  
practical course for the award of B.Sc. Degree in *Electronics*  
by **Shivaji University, Kolhapur.**

Place: Kolhapur

Date: 28/05/2022

  
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**Mr. P.R. Bagade**

## ACKNOWLEDGEMENTS

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 **Siddhanath C. Gopane**

 **Ketan D. Khanaj**

 **Vaibhav E. Doke**

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## ABSTRACT

Radar is an object detection system which uses radio waves to determine the range, altitude, direction, or speed of objects. It can be used to detect aircraft, ships, spacecraft, guided missiles, motor vehicles, weather formations, and terrain. The radar dish or antenna transmits pulses of radio waves or micro waves which bounce off any object in their path. The object returns a tiny part of the wave's energy to a dish or antenna which is usually located at the same site as the transmitter.

The modern uses of radar are highly diverse, including air traffic control, radar astronomy, air-defense systems, antimissile systems; marine radar start locate landmarks and other ships; aircraft anti-collision systems; ocean surveillance systems, outer space surveillance and rendezvous systems; meteorological precipitation monitoring; altimetry and flight control systems; guided missile target locating systems; and ground-penetrating radar for geological observations. High tech radar systems are associated with digital signal processing and are capable of extracting useful information from very high noise levels.

The Arduino based project requires a ultrasonic sensor, the sensor released the waves which we want to measure the distance of a object. The microcontrollers of the Arduino board can be programmed using C and C++ languages. When a code is written in Arduino UNO IDE software and connected to the board through a USB cable, Arduino boards have lot of applications in the present day scenario, so we have decided to do a small project on them.



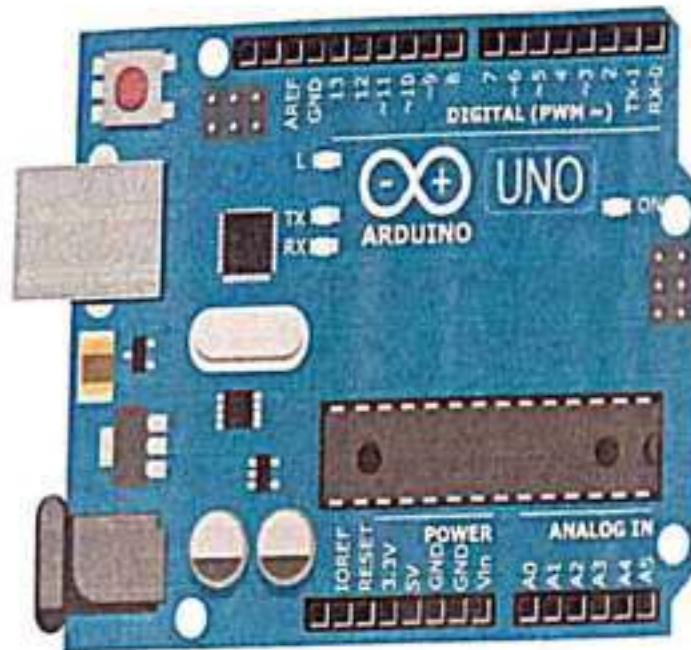
## INTRODUCTION

**Defining Arduino:** An Arduino is actually a microcontroller based kit which can be either used directly by purchasing from the vendor or can be made at home using the components, owing to its open source hardware feature. It is basically used in communications and in controlling or operating many devices.

1. Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twittermessage - and turn it into an output - activating a motor, turning on an LED, publishing something online. You can tell your board what to do by sending a set of instructions to the microcontroller on the board. To do so you use the Arduino programming language (based on Wiring), and the Arduino Software (IDE), based on Processing.

2. Over the years Arduino has been the brain of thousands of projects, from everyday objects to complex scientific instruments. A worldwide community of makers - students, hobbyists, artists, programmers, and professionals - has gathered around this open-source platform, their contributions have added up to an incredible amount of accessible knowledge that can be of great help to novices and experts alike.

3. Arduino was born at the Ivrea Interaction Design Institute as an easy tool for fast prototyping, aimed at students without a background in electronics and programming. As soon as it reached a wider community, the Arduino board started changing to adapt to new needs and challenges, differentiating its offer from simple 8-bit boards to products for IoT applications, wearable, 3D printing, and embedded environments. All Arduino boards are completely open-source, empowering users to build them independently and eventually adapt them to their particular needs. The software, too, is opensource, and it is growing through the contributions of users worldwide.



### 1.1. How to program an Arduino ?

The Arduino tool window consists of the toolbar with the buttons like verify, upload, new, open, save, serial monitor. It also consists of a text editor to write the code, a message area which displays the feedback like showing the errors, the text console which displays the output and a series of menus like the File, Edit, Tools menu. This code is uploaded by the bootloader onto the microcontroller.

### ULTRASONIC SENSOR



## 1.1. ULTRASONIC SENSOR

As the name indicates, ultrasonic sensors measure distance by using ultrasonic waves. The sensor head emits an ultrasonic wave and receives the wave reflected back from the target. Ultrasonic Sensors measure the distance to the target by measuring the time between the emission and reception.

An optical sensor has a transmitter and receiver, whereas an ultrasonic sensor uses a single ultrasonic element for both emission and reception. In a reflective model ultrasonic sensor, a single oscillator emits and receives ultrasonic waves alternately. This enables miniaturization of the sensor head.

Distance calculation

The distance can be calculated with the following formula:

$$\text{Distance } L = 1/2 \times T \times C$$

Where L is the distance, T is the time between the emission and reception, and C is the sonic speed. (The value is multiplied by 1/2 because T is the time for go-and-return distance.) Features

The following list shows typical characteristics enabled by the detection system.

[Transparent object detectable]

Since ultrasonic waves can reflect off a glass or liquid surface and return to the sensor head, even transparent targets can be detected.

[Resistant to mist and dirt]

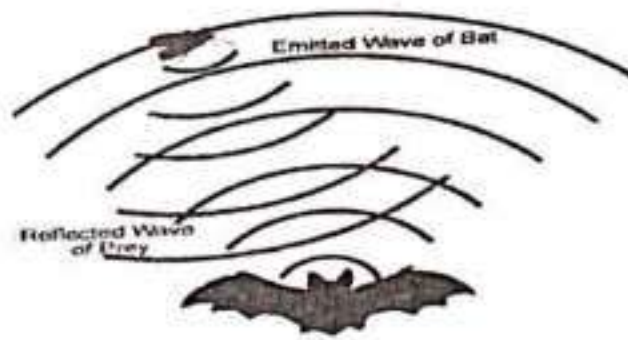
Detection is not affected by accumulation of dust or dirt. [Complex shaped objects detectable]

Presence detection is stable even for targets such as mesh trays or springs.

## PRINCIPLE OR METHODOLOGY

A radar system has a transmitter that emits radio waves called a radar signals in predetermined directions. When these come into contact with an object they are usually reflected or scattered in many directions. Example:- let us take example for bat

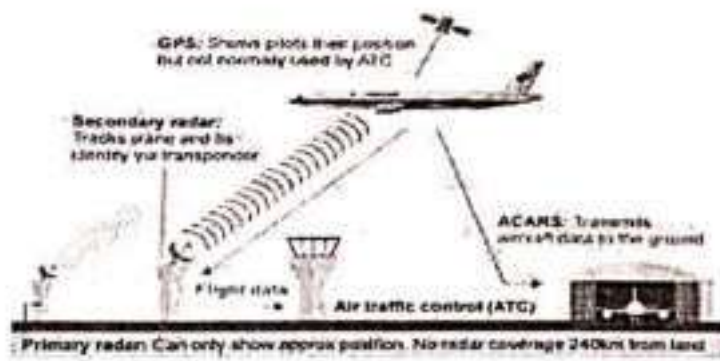
Bat released the eco sound while travelling if any object came in middle and it reflect back to the bat



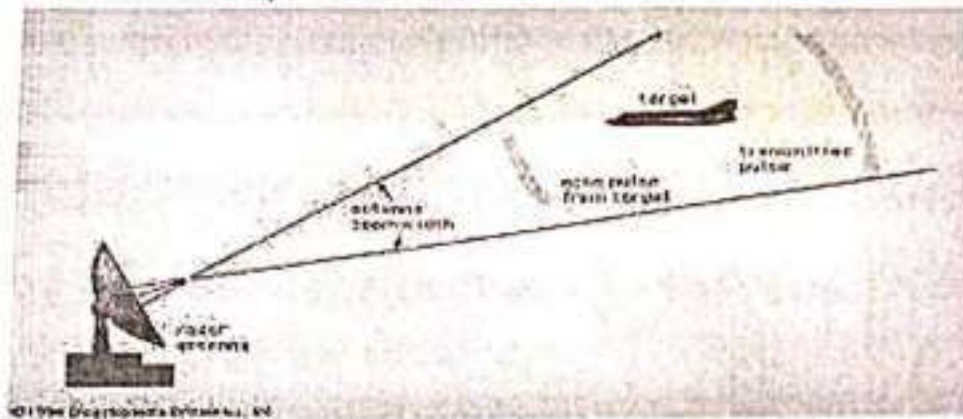
### Applications and usages:-

The development of the radar technology took place during the World War II in which it was used for detecting the approaching aircraft and then later for many other purposes which finally led to the development of advanced military radars being used these days. Military radars have a highly specialized design to be highly mobile and easily transportable, by air as well as ground. Military radar should be an early warning, altering along with weapon control functions. It is specially designed to be highly mobile and should be such that it can be deployed within minutes.





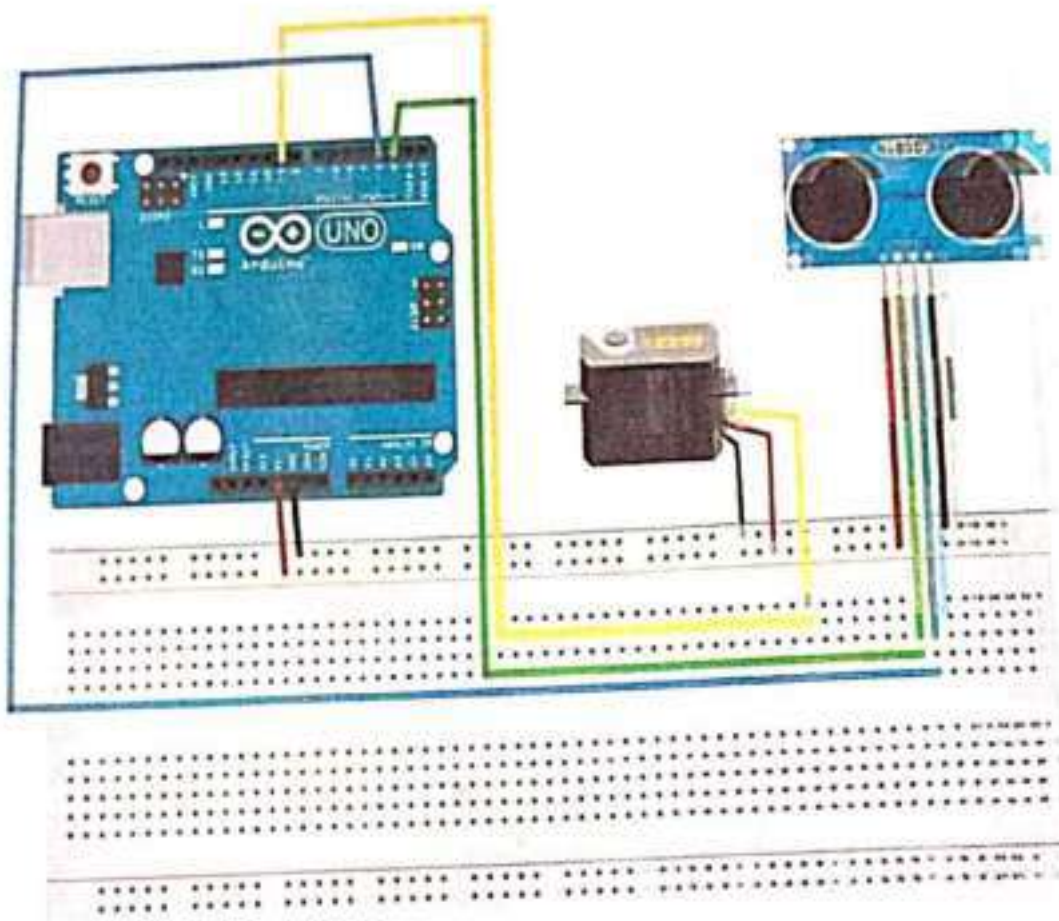
Here's a summary of how radar works:



- Magnetron generates high-frequency radio waves.
- Duplexer switches magnetron through to antenna.
- Antenna acts as transmitter, sending narrow beam of radio waves through the air.

Radio waves hit enemy airplane and reflect back.

# ARCHITECTURE OF PROJECT:-



## PROCEDURE

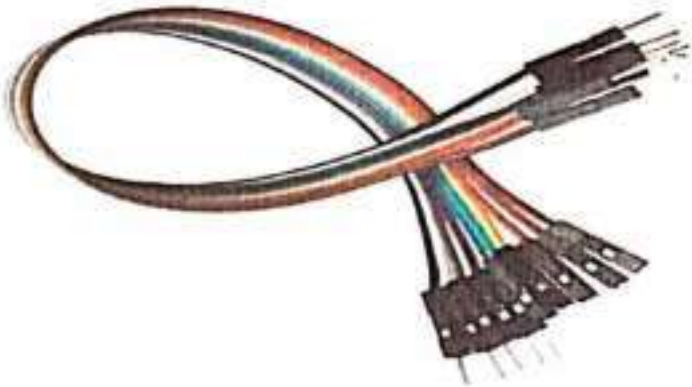
### Components Required:

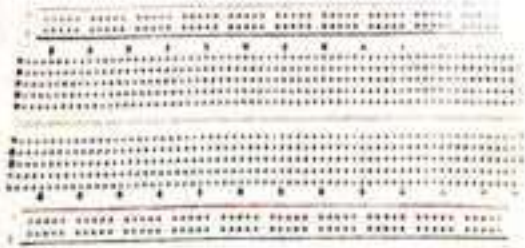
In this project we have used the arduino and ultrasonic sensor along with the jumper wires and the relay motors and details list of the hardware components are

- Arduino board and arduino cable

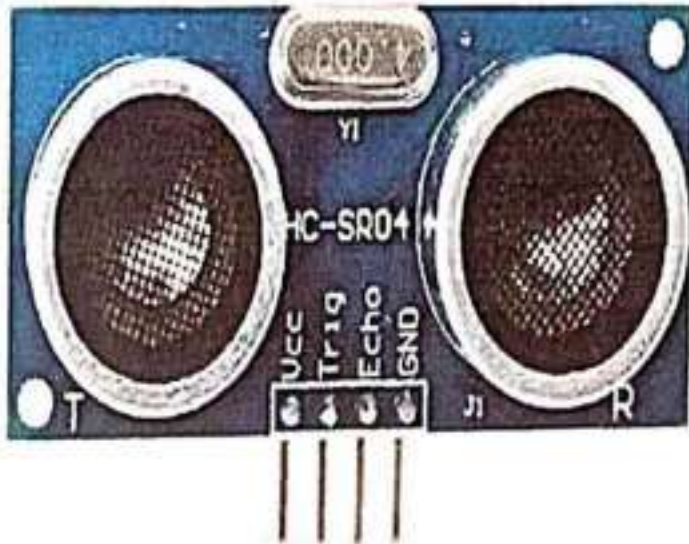


- Jumper wires





Bread board



Ultrasonic sensor



□ Relay motor



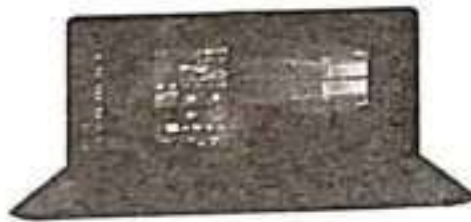
□ Double side plaster



□ gum gun



□ LAPTOP



## WORKING

### PRACTICAL IMPLEMENTATION

#### A. Making On Arduino Board.

Since, we believe in learning by doing. So, we decided to make our own arduino board instead of using the readymade board. So, the steps required to make an arduino board are as follows:

Boo-loading an Atmega328 using the Arduino board/AVR Programmer by uploading the hex loader to the Microcontroller.

Making the connections on a general purpose PCB, connecting the crystal oscillator, capacitors,connectors for the connections to Arduino board etc.

Providing the power supply, usually 5 volts. Arduino is Ready to use.

After you have done all this, then only the minimum circuitry like crystal oscillator, capacitors, connectors, power supply is required to complete the board. The same circuit can be made on the PCB, either designed or general purpose. Since, Arduino is an Open-Source. Hence, it is easy to make and can have any enhancements as per the requirements.

#### B. Connecting Servo Motor

A servomotor is a rotary actuator that allows for precise control of angular position, velocity and acceleration.

A normal servo motor has three terminals:

1. VCC
2. GND
3. PULSE

A servo motor works at normally 4.8 to 6 volts. Ground is provided by connecting it to the Ground of the Arduino. The total time for a servo motor pulse is usually 20ms. To move it to one end of say 0 degree angle, a 1ms pulse is used and to move it to other end i.e 180 degrees, a 2ms pulse is applied. Hence, according to this to move the axis of the servo motor to the center, a pulse of time 1.5 ms should be applied. For this, the pulse wire of the servo motor is connected to the Arduino that provides the digital pulses for pulse width modulation of the pulse. Hence, by programming for a particular pulse interval the servo motor can be controlled easily.

### C. Connecting Ultrasonic Sensor:-

An Ultrasonic Sensor consists of three wires. One for Vcc, second for Ground and the third for pulse signal. The ultrasonic sensor is mounted on the servo motor and both of them further connected to the Arduino board. The ultrasonic sensor uses the reflection principle for its working. When connected to the Arduino, the Arduino provides the pulse signal to the ultrasonic sensor which then sends the ultrasonic wave in forward direction. Hence, whenever there is any obstacle detected or present in front, it reflects the waves which are received by the ultrasonic sensor.

If detected, the signal is sent to the Arduino and hence to the PC/laptop to the processing software that shows the presence of the obstacle on the rotating RADAR screen with distance and the angle at which it has been detected!

## VI. USING PROCESSING SOFTWARE

### VII.



Processing is an open source programming language and integrated development environment (IDE) built for the electronic arts, new media art, and visual design communities with the purpose of teaching the fundamentals of computer programming in a visual context, and to serve as the foundation for electronic sketchbooks. The project was initiated in 2001 by Casey Reas and Benjamin Fry, both formerly of the Aesthetics and Computation Group at the MIT Media Lab. One of the stated aims of Processing is to act as a tool to get non-programmers started with programming, through the instant gratification of visual feedback. The language builds on the Java language, but uses a simplified syntax and graphics programming models.

### VIII. PROBLEMS FACED

#### A. Making Own Arduino Board

The Arduino boards are available readily in the electronics market, but we decided to make our own Arduino board instead of buying one. So, the first problem was where to start from to achieve this goal. Since, all parts on an Arduino board are SMD's, so we had to find a way to replace the SMD's with DIP IC's and also had to make an AVR programmer in order to pursue our further work. Hence, it took us some days to determine and plan our course of action.

After that we had to boot load the AVR chip so as to make it compatible with the Arduino.



IDE software. Hence, we had to find a way to boot load the Arduino using the AVR programmer. It took us a long time to make the AVR programmer by researching on the type of communication and architecture of the AVR as it is not as same as a 8051 microcontroller.

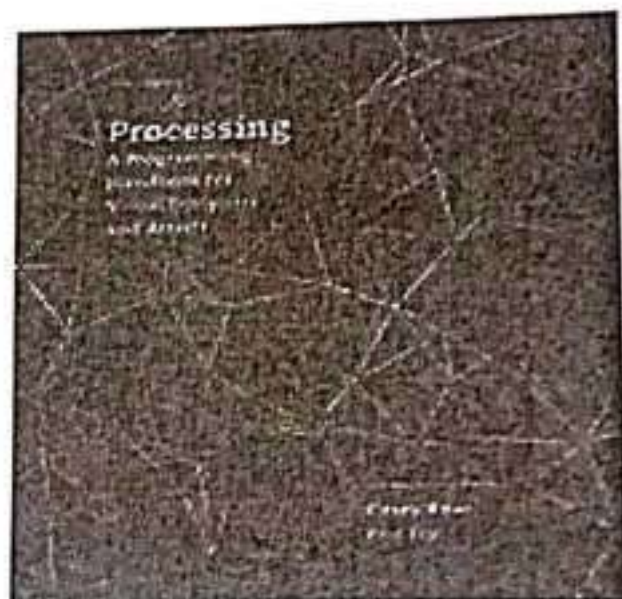
#### B. Communicating with Arduino through PC

Another major problem related to the Arduino board was the communication with it from PC. Since, there is a requirement of an RS-232 to TTL conversion for the communication, so try some methods:

- [1] Firstly I used the MAX-232 IC to communicate with the Arduino as with the 8051 but due to large voltage drop and mismatch in the speed, it failed to communicate.
- [2] Next, I tried to use a dedicated AVR as USB to Serial converter as in the original Arduino board, the difference being DIP AVR used by us instead of the SMD Mega16U2 controller.

But, unfortunately I was unable to communicate through it.

- [3] At last I had no other choice but to use the FTDI FT-232R chip for USB to Serial conversion. Finally IT WORKED!!!



# Arduino Code

```
// Includes the Servo library
#include <Servo.h>
// Defines Trig and Echo pins of the Ultrasonic Sensor
const int trigPin = 10;
const int echoPin = 11;
// Variables for the duration and the distance
long duration;
int distance;
Servo myServo; // Creates a servo object for controlling the servo motor
void setup() {
  pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
  pinMode(echoPin, INPUT); // Sets the echoPin as an Input
  Serial.begin(9600);
  myServo.attach(12); // Defines on which pin is the servo motor attached
}
void loop() {
  // rotates the servo motor from 15 to 165 degrees
  for(int i=15;i<=165;i++){
    myServo.write(i);
    delay(30);
    distance = calculateDistance(); // Calls a function for calculating the distance
    measured by the Ultrasonic sensor for each degree

    Serial.print(i); // Sends the current degree into the Serial Port Serial.print(","); //
    Sends addition character right next to the previous value needed later in the
    Processing IDE for indexing
    Serial.print(distance); // Sends the distance value into the Serial Port
    Serial.print("."); // Sends addition character right next to the previous value
    needed later in the Processing IDE for indexing
  }
  // Repeats the previous lines from 165 to 15 degrees
  for(int i=165;i>15;i--){
    myServo.write(i);
    delay(30);
    distance = calculateDistance();
    Serial.print(i); Serial.print(",");
    Serial.print(distance);
    Serial.print(".");
  }
}
```

```
// Function for calculating the distance measured by the Ultrasonic sensorint  
calculateDistance(){
```

```
    digitalWrite(trigPin, LOW);  
    delayMicroseconds(2);  
    // Sets the trigPin on HIGH state for 10 micro seconds  
    digitalWrite(trigPin, HIGH);  
    delayMicroseconds(10);  
    digitalWrite(trigPin, LOW);  
    duration = pulseIn(echoPin, HIGH); // Reads the echoPin, returns the  
    sound wave travel time in microseconds  
    distance= duration*0.034/2;  
    return distance;  
}
```

## Processing Code

```
import processing.serial.*; // imports library for serial communication  
import java.awt.event.KeyEvent; // imports library for reading the data from the  
serial port  
import java.io.IOException;  
Serial myPort; // defines Object Serial  
// defubes variables  
String angle="";  
String distance="";  
String data="";  
String noObject;  
float pixsDistance;  
int iAngle, iDistance;  
int index1=0;  
int index2=0;  
PFont orcFont;  
void setup() {  
  
    size (1375, 700); // ***CHANGE THIS TO YOUR SCREEN RESOLUTION***  
    smooth();  
    myPort = new Serial(this,"COM6", 9600); // starts the serial communication  
    myPort.bufferUntil('.'); // reads the data from the serial port up to the character '!'. So  
    actually it reads this: angle,distance.  
}  
void draw() {  
  
    fill(98,245,31);
```



```

// simulating motion blur and slow fade of the moving line
noStroke();
fill(0,4);
rect(0, 0, width, height-height*0.065);

fill(98,245,31); // green color
// calls the functions for drawing the radar
drawRadar();
drawLine();
drawObject();
drawText();
}
void serialEvent (Serial myPort) { // starts reading data from the Serial Port
// reads the data from the Serial Port up to the character ',' and puts it into the String
variable "data".
data = myPort.readStringUntil(',');
data = data.substring(0,data.length()-1);

index1 = data.indexOf(","); // find the character ',' and puts it into the variable
"index1"
angle= data.substring(0, index1); // read the data from position "0" to position of
the variable index1 or thats the value of the angle the Arduino Board sent into the
Serial Port
distance= data.substring(index1+1, data.length()); // read the data from position
"index1" to the end of the data pr thats the value of the distance

// converts the String variables into Integer
iAngle = int(angle);
iDistance = int(distance);
}
void drawRadar() {
pushMatrix();
translate(width/2,height-height*0.074); // moves the starting coordinats to new
location
noFill();
strokeWeight(2);
stroke(98,245,31);
// draws the arc lines
arc(0,0,(width-width*0.0625),(width-width*0.0625),PI,TWO_PI);
arc(0,0,(width-width*0.27),(width-width*0.27),PI,TWO_PI);
arc(0,0,(width-width*0.479),(width-width*0.479),PI,TWO_PI);
arc(0,0,(width-width*0.687),(width-width*0.687),PI,TWO_PI);
// draws the angle lines
line(-width/2,0,width/2,0);
line(0,0,(-width/2)*cos(radians(30)),(-width/2)*sin(radians(30)));
line(0,0,(-width/2)*cos(radians(60)),(-width/2)*sin(radians(60)));
}

```



```

line(0,0,(-width/2)*cos(radians(90)),(-width/2)*sin(radians(90)));
line(0,0,(-width/2)*cos(radians(120)),(-width/2)*sin(radians(120)));
line(0,0,(-width/2)*cos(radians(150)),(-width/2)*sin(radians(150)));
line((-width/2)*cos(radians(30)),0,width/2,0);
popMatrix();
}
void drawObject() {
  pushMatrix();
  translate(width/2,height-height*0.074); // moves the starting coordinats to new
  location
  strokeWeight(9);
  stroke(255,10,10); // red color
  pixsDistance = iDistance*((height-height*0.1666)*0.025); // covers the distance
  from the sensor from cm to pixels
  // limiting the range to 40 cms
  if(iDistance<40){
    // draws the object according to the angle and the distance
    line(pixsDistance*cos(radians(iAngle)),-pixsDistance*sin(radians(iAngle)),(width-
    width*0.505)*cos(radians(iAngle)),-(width-width*0.505)*sin(radians(iAngle)));
  }
  popMatrix();
}
void drawLine() {
  pushMatrix();
  strokeWeight(9);
  stroke(30,250,60);
  translate(width/2,height-height*0.074); // moves the starting coordinats to new
  location
  line(0,0,(height-height*0.12)*cos(radians(iAngle)),-(height-
  height*0.12)*sin(radians(iAngle))); // draws the line according to the angle
  popMatrix();
}
void drawText() { // draws the texts on the screen

  pushMatrix();
  if(iDistance>40) {
    noObject = "Out of Range";
  }
  else {
    noObject = "In Range";
  }
  fill(0,0,0);
  noStroke();
  rect(0, height-height*0.0648, width, height);
  fill(98,245,31);
  textSize(25);

```

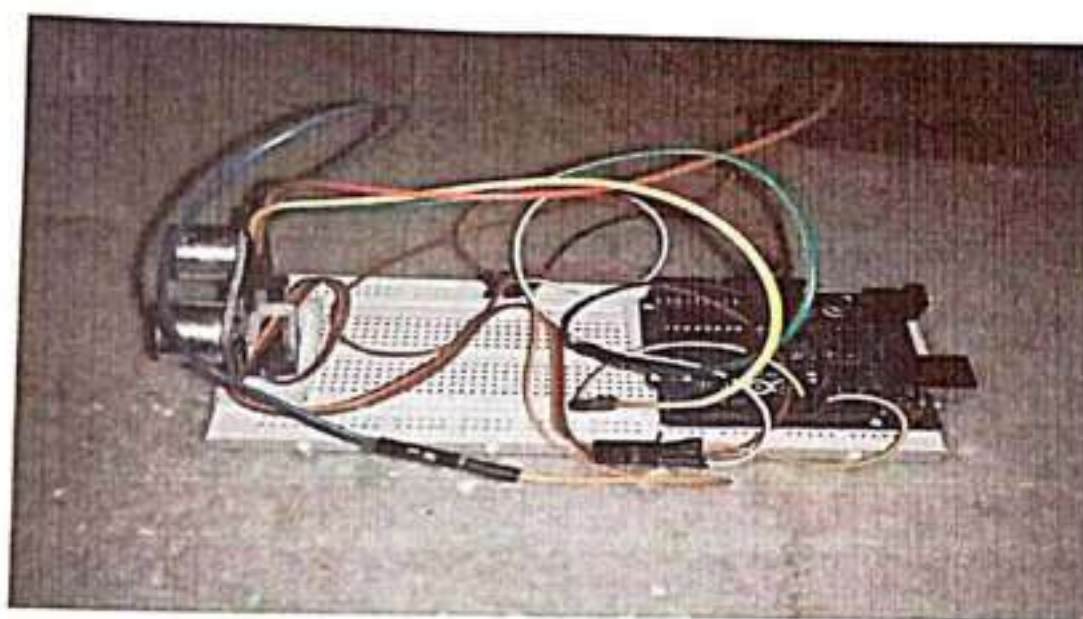
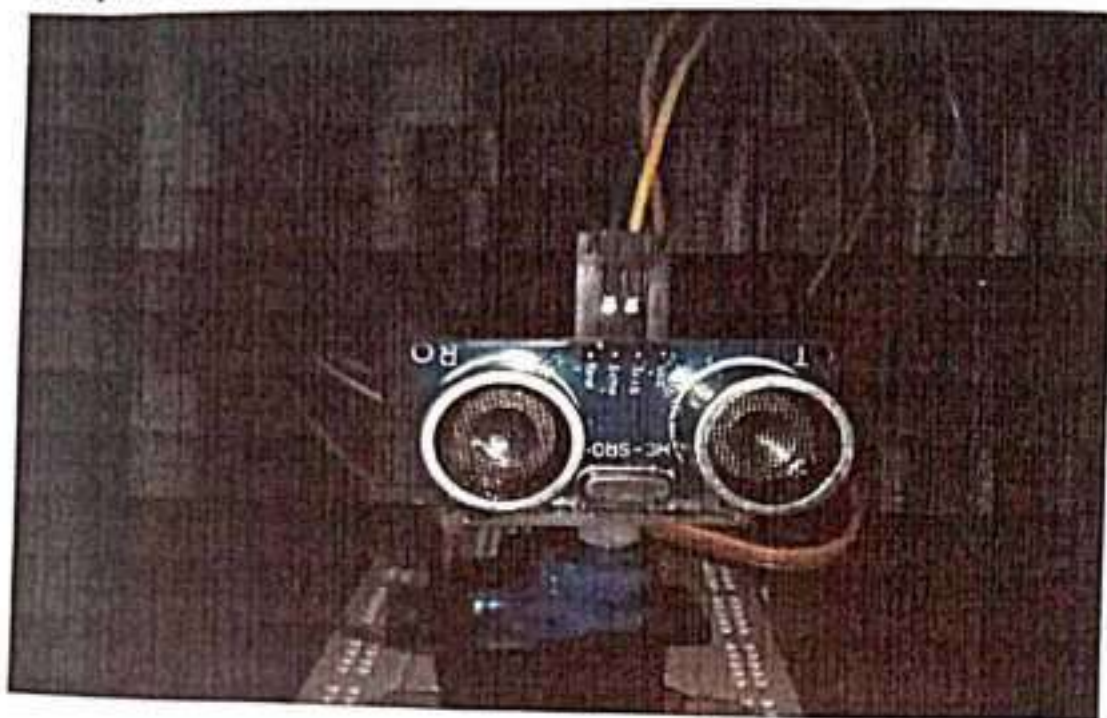
```

text("10cm",width-width*0.3854,height-height*0.0833);
text("20cm",width-width*0.281,height-height*0.0833);
text("30cm",width-width*0.177,height-height*0.0833);
text("40cm",width-width*0.0729,height-height*0.0833);
textSize(40);
text("Vivekanand College, Kolhapur ", width-width*0.875, height-height*0.0277);
text("Angle: " + iAngle + " °", width-width*0.48, height-height*0.0277);
text("Distance: ", width-width*0.30, height-height*0.0277);
if(iDistance<40) {
text("      " + iDistance + " cm", width-width*0.225, height-height*0.0277);
}
textSize(25);
fill(98,245,60);
translate((width-width*0.4994)+width/2*cos(radians(30)),(height-height*0.0907)-
width/2*sin(radians(30)));
rotate(-radians(-60));
text("30°",0,0);
resetMatrix();
translate((width-width*0.503)+width/2*cos(radians(60)),(height-height*0.0888)-
width/2*sin(radians(60)));
rotate(-radians(-30));
text("60°",0,0);
resetMatrix();
translate((width-width*0.507)+width/2*cos(radians(90)),(height-height*0.0833)-
width/2*sin(radians(90)));
rotate(radians(0));
text("90°",0,0);
resetMatrix();
translate(width-width*0.513+width/2*cos(radians(120)),(height-height*0.07129)-
width/2*sin(radians(120)));
rotate(radians(-30));
text("120°",0,0);
resetMatrix();
translate((width-width*0.5104)+width/2*cos(radians(150)),(height-height*0.0574)-
width/2*sin(radians(150)));
rotate(radians(-60));
text("150°",0,0);
popMatrix();

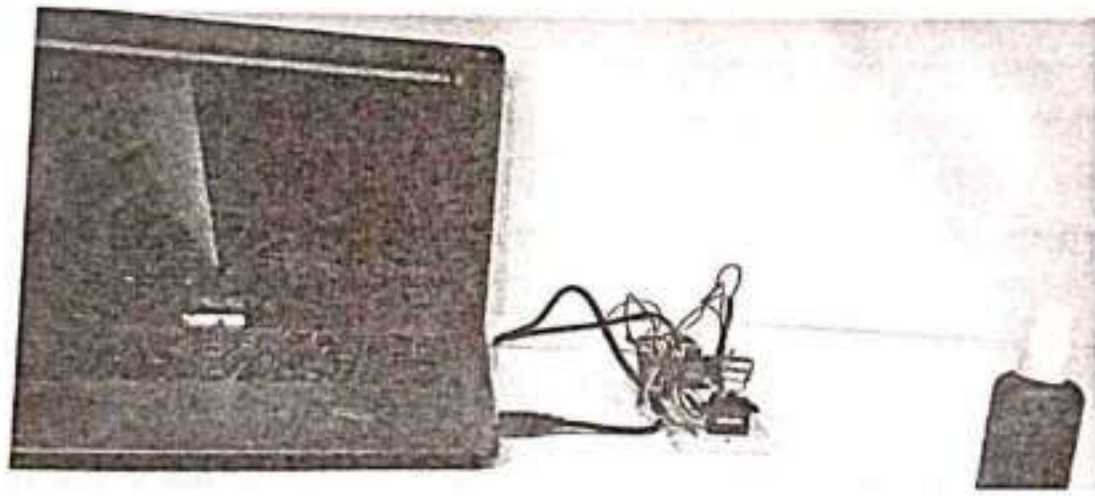
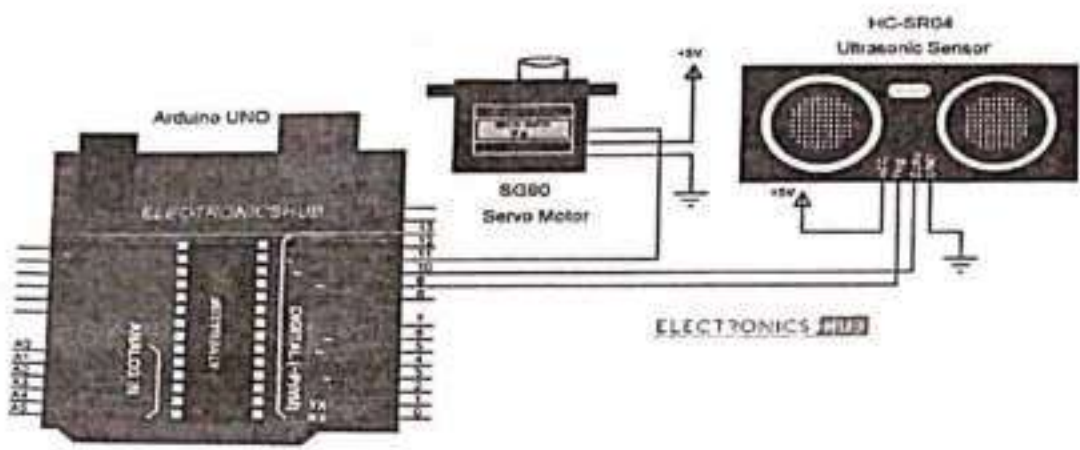
```

}

Output: Screenshot









## ADVANTAGES:-

1. **The cost effective** : our project below 1000rs only.
2. **Improved accuracy**: The resistors with low value in milliohms are used in advanced cars with sensitive power steering and break circuits. Now a days these advancements have become the major cause for the severe accidents . Therefore the components used in such circuits must have accurate and precise value for smooth working of such circuits. Ultimately this refers to the accurate testing of the resistors used. Improved accuracy is thus the second primary aim of the sensor.
3. **Reduced hardware complexity**: Hardware complexity is one of the reasons for the high cost of the ultrasonic sensor. The use of arduino Uno is to reduce the motherboard present in the conventional ohmmeter in arduino based ultrasonic sensor. The arduino acts as the central board. Since arduino are readily available in market it leads to the reduction in the complexity of the design. The automated range selection is also the objective in order to speedup the testing process. This will also reduce the faults in range selection in manually operated conventional sensor.

## CONCLUSIONS

This project aims on the use of Ultrasonic Sensor by connected to the Arduino UNO R3 board and the signal from the sensor further provided to the screen formed on the laptop to measure the presence of any obstacle in front of the sensor as well as determine the range and angle at which the obstacle is detected by the sensor

“जान, विज्ञान और सुसंस्कार इसके लिए शिक्षणप्रसार।”

-शिक्षणमहर्षी डॉ. बापूजीसाकुंखे

श्री स्वामी विवेकानंद शिक्षण संस्था, कोल्हापुर संचालित,

विवेकानंद कॉलेज, कोल्हापुर (स्वायत्त)

हिंदी विभाग

वैश्विक सन:- 2021-22

विवेकानंद कॉलेज, कोल्हापुर (स्वायत्त) के निर्देशानुसार सत्र VI के अंतर्गत  
मूल्यमापन के तहत

प्रोजेक्ट लेखन

हिंदी पेपर नं. - XV

प्रयोजनमूलक हिंदी

प्रोजेक्ट विषय- रेडियो और रेडियो जॉकी।

क्र.	छात्रोंके नाम	रोलनं.	सही
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## प्रस्तावना

रेडिओ शब्द की उत्पत्ति लैटिन भाषा के 'रेडियस' शब्द से हुई है। रेडियो जहाँ पहले मिडिया का एक सशक्त माध्यम हुआ कर्ता था, वहीं अब रेडियो की जगह इंटरनेट, मोबाइल, कंप्यूटर आदि ने ले ली है। हालांकि, अब भी रेडियो लोगों की जिंदगी का एक अहम हिस्सा बना हुआ है।

भारत में साल 1924 में सबसे पहले मद्रास प्रेसिडेंसी क्लब रेडियो को लेकर आया था। साल 1932 में भारत सरकार ने 'इंडियन ब्रॉडकास्टिंग सर्विस' शुरू किया। जिसका नाम 1936 में 'ऑल इंडिया रेडियो' रख दिया गया। आगे चलकर रेडियो इतने बदलाव है गएकी 21 वीस दी में भी रेडियो ने अपना स्थान बना रखा है। इतने सारे मनोरंजन के माध्यम होते हुए भी रेडियो ने वक्त वक्त पर अपने आपमें एक अलग पन रखा है। इसी वजह से रेडियो आज भी लोगों में अपनी पहचान बना हुआ है।

रेडिओ में कई सारे रोजगार के अवसर हैं। कला शाखा के छात्रों को अपने गुणों का प्रदर्शन करने के लिए यह एक अच्छा मंच है। रेडिओ में काम करते करते अपनी अलग पहचान बनाए रखने के लिए यह एक सहज और सुलभ जरिया है।

## उद्देश्य

आज के 21 वीं सदी में मनोरंजन के कई सारे माध्यम उपलब्ध हैं। इंटरनेट, मोबाइल, कंप्यूटर जैसे प्रगल्भ माध्यमों का हमारे जीवन पर बहुत प्रभाव है। दुनियाभर की घटनाओं की खबर हमें चंदघंटों में मिलती है। इतने सारे प्रभावी माध्यमों में रेडियो ने अपना स्थान बना रखा है। आज भी लोग उतने ही अपने-पनसे रेडियो सुनते हैं।

रेडियो में कई सारे रोजगार के अवसर हैं। जहाँ पर कला या अन्य किसी भी शाखा के छात्रों की आवश्यकता होती है। रेडियो जाँकिंग या अन्य किसी भी कैरियर में हम काम कर सकते हैं। रेडियो के लिए समाचार देना, म्यूजिक देना, कथा-लेखन करना, किसी कंपनी या बड़े-बड़े दुकान की जाहिरा लिखना इस तरह कई सारे रोजगार रेडियो के माध्यम से उपलब्ध हैं।

आज के इस प्रतियोगितात्मक युग में रेडियो में छात्रों के लिए कई सारे रोजगार के अवसर हैं, जिससे वह अपना कैरियर बना सकते हैं।

## रेडिओ की उत्पत्ति

रेडिओ शब्द की उत्पत्ति लैटिन भाषा के रेडियसशब्द से हुए हैं। रेडियस का अर्थ है एक संकीर्ण किरण या प्रकाश स्तंभ जो आकाश में इलेक्ट्रोमैग्नेटिक तरंगों द्वारा फैलाते है। यह विद्युतचुंबकीय तरंग संकेतों के रूप में सूचनाओं को एक स्थान से दूसरे स्थान तक ले जाने का काम करते हैं।

रेडियो जहाँ पहले मीडिया का एक सशक्त माध्यम हुआ करता था, वही अब रेडिओ की जगह इंटरनेट, मोबाइल, कंप्यूटर आदिने ली है। हालांकि, अब भी रेडियो लोगों की जिंदगी का एक हम हिस्सा बना हुआ है।

रेडिओ का आविष्कार प्रसिद्ध वैज्ञानिक मार्कोनी ने किया था, इन्होंने दुनिया का पहला रेडियो संदेश इंग्लैंड से अमेरिका भेजा था। वही कॅनेडा के वैज्ञानिक रेमीनाल्ड फेसेडॉनने 24 दिसंबर 1906को रेडियो ब्रॉडकास्टिंग के द्वारा संदेश भेज कर रेडियो की शुरुआत की थी।





## भारत में रेडियो की शुरुआत और उसका इतिहास



भारत में साल 1924 में सबसे पहले मद्रास प्रेसिडेंसी क्लब रेडिओ को लेकर आया था। इस क्लब में साल 1927 तक रेडिओ ब्रॉडकास्टिंग पर प्रसारण का काम किया था, हालांकि बाद में आर्थिक परेशानियों के चलते मद्रास क्लब द्वारा इसे बंद कर दिया गया था। इसके बाद इसी साल 1927 में बॉम्बे के कुछ बड़े बिजनेसमैन ने भारतीय प्रसारण कंपनी को बॉम्बे और कोलकाता में शुरू किया। इसके बाद 1932 में भारत सरकार ने इसकी जिम्मेदारी ले ली और इंडियन ब्रॉडकास्टिंग सर्विस नाम का विभाग शुरू किया, जिसका साल 1936 में नाम बदलकर ऑल इंडिया रेडियो रख दिया गया जो कि आकाशवाणी के नाम से भी जाना जाता है। भारत में सरकार द्वारा बनाई गई रेडिओ प्रसारण एक राष्ट्रीय सेवा थी, जिसके बाद पूरे देश में इसके प्रसारण के लिए स्टेशन बनाए गए थे और देश के कोने कोने तक उसकी पहुँच बनाई गई थी। रेडियो ने भारत की आजादी में अपनी अहम भूमिका निभाई थी। साल 1942 में नेशनल कांग्रेस रेडियो का प्रसारण जब शुरू किया गया था, तब स्वतंत्रता आन्दोलन में अपनी महत्वपूर्ण भूमिका निभाने वाले महात्मा गाँधीजी ने इसी रेडियो स्टेशन से अंग्रेजों भारत छोड़ो का प्रसारण किया था।

नेताजी सुभाष चन्द्र बोस ने स्वतंत्रता आंदोलन के दौरान तुम मुझे खून दो मैं तुम्हें आजादी दूंगा का लोकप्रिय नारा रेडियो के द्वारा जर्मनी से प्रसारित किया गया था। इसके अलावा कई नारे रेडियो के द्वारा प्रसारित कर लोगों के अंदर आजादी पाने की इच्छा जागृत की गई थी। हालांकि भारत की आजादी के बाद साल 1957 में ऑल इंडिया रेडियो का नाम बदलकर आकाशवाणी रख दिया गया था। वही अब रेडियो एफ एम का रूप ले चुका है और इसमें कई आधुनिक सेवाएं भी शुरू की गई हैं। इसलिए यह अभी भी लोगों की ज़िंदगी का हिस्सा बना हुआ है और एक बड़े संचार के नेटवर्क के रूप में पूरी दुनिया पर फैला हुआ है।



## रेडियो और हिंदी भाषा

जैसा हम जानते हैं, रेडिओ एक उच्चारित माध्यम है। भाषा के बिना किसी भी जन संचार माध्यम के अस्तित्व कि कल्पना नहीं की जा सकती, किंतु रेडियो की तो यह आत्मा है। समाचार हो या संगीत बौद्धिक कार्यक्रम हो अथवा साहित्यिक और भावात्मक कार्यक्रम, सभी शब्दों पर निर्भर हैं। प्रसारण विशेषज्ञों का मानना है कि व्यापक जनता तक संदेश पहुंचाने के लिए प्रसारण की भाषा ऐसी प्रभावी होनी चाहिए जिसे श्रोता वर्ग आसानी से समझ सके। यदि भाषा सरल और संग्रह्य होगी तो उसे सामान्य तथा विद्वान निरक्षर, साक्षर और बाल, युवा और वृद्ध समान रूप से समझ सकेंगे।

भाषा सहज, प्रवाहमय, और स्पष्ट होनी चाहिए। वाक्य छोटे-छोटे और अपने आप में पूर्ण होने चाहिए। वाक्य - हवन्यास इस प्रकार का होना चाहिए जो हृदय की सम्प्रेष्य भावनाओं और हवचारों को श्रोताओं तक पहुंचाने में सक्षम हो। कठिन शब्दों के प्रयोग और अत्याधिक अलंकाररक भाषा से बचना चाहिए। क्योंकि अर्णजटिल होते ही श्रोता का ध्यान उचट जाता है और वहीं पर आकर वाताण असफल होने लगती है। रेडिओ कार्यक्रम के लेखन की असफता इस बात में है कि वह श्रोताओं के मस्तक पर तुरंत उत्पन्न करे और उनकी कल्पनाशक्ती को अद्भुत करते हुए भाषा के श्वर के सार ही आँखों के सम्मुख उस हवषय का चित्र उत्पन्न कर दे।

शब्दों का ऐसा प्रयोग होना चाहिए जो अपने अर्णके सार पूरी तरह खुलते हैं। बौद्धिकता से बौद्धिक भाषा रेडियो श्रोता के चलने उबाऊ होने के सार - सार सुगम भी नहीं होती इस चलने बहुत पाठ्यपूर्ण लेखन को शल्य के प्रदर्शन से भी बचना चाहिए। लेखक न ऐसा नहीं है कि प्रत्येक हवषय की वाताण में ही साठि सपाट वर्णन शैली का प्रयोग हुआ जाने लगा। कुछ ऐसे हवषय भी होते हैं, जिनमें अलंकाररक भाषा, शब्द सौंदर्य और अर्णगांभीयण अपेक्षित होता है। ऐसी वाताणों को भी श्रोता बहुत मनोयोग के सार सुनते हैं क्योंकि शब्दों के प्रयोग का लाचलत्य और गदय का लयात्मक माचुयण कानों को अत्यंत प्रय लगता है।

शब्द सौंदर्य अपना माचुयण तो छोड़ते ही सार ही मन में आगे की बात जानने की उत्सुकता भी जगाते हैं। यह होता है शैली का जादू। जिस प्रकार हर व्यक्ति की अपनी-अपनी रुचियाँ होती हैं, आदतें होती हैं, बोलने का ढंग होता है और उसे हम उसकी जीवन शैली कहते हैं उसी प्रकार प्रत्येक लेखक की अपनी हवचशष्ट्य लेखन शैली होती है जो लोगों को अपनी ओर आकृष्ट करती है।

रेडियो की भाषा के लिए मुख्य रूप से निम्नलिखित विशेषताएँ आवश्यक हैं :-

1. सहजबोध :-

कोई भी भाषा सहज, सरल और सूक्ष्म होने से श्रोता के लिए बोधगम्य हीन ही होता बल्कि उसका सहज बोध होना भी श्रोता के लिए जरूरी होता है। भाषा में ऐसे शब्दों का प्रयोग किया जाए, जो बोलचाल और लोक व्यवहार में हो।

2. मानकीकरण :

रेडियो की भाषा का माननी कृत होना अत्यंत आवश्यक है। यह मानकीकरण मुख्य रूप से चार पक्षों पर आधारित होना चाहिए।

(अ) मानकवर्तनी

(ब) मानक लिपी

(क) मानक व्याकरण

(ड) मानक उच्चारण

3. दृश्यात्मकता :-

रेडियो की भाषा में दृश्यात्मकता का गुण होना भी आवश्यक है। श्रोता के सामने सुनते समय यदि घटना या सूचना का दृश्य उपस्थित हो जाता है। इसके लिए लेखक को शब्दों को सार्थक चयन करते समय घटना की दृश्य प्रदान करना चाहिए। आकड़ों या तथ्यों के समय दृश्यों की आवश्यकता नहीं होती लेकिन फीचर वृत्तचित्र, कॉमेंट्री, उद्घोषणा आदि के समय लेखक को यह ध्यान रखना चाहिए कि भाषा यदि दृश्यात्मकता का निर्वाह कर पाने में सक्षम होगी तो संचार, सहजरूप से हो पाएगा।



रेडियो की कार्यक्रम की भाषा या लेखन में निम्न बिंदुओं पर ध्यान देना चाहिए:-

1. रेडियो की भाषा सरल और आम बोलचाल की होनी चाहिए।
2. वाक्य संक्षिप्त हो अर्थात् छोटे-छोटे हो।
3. एक वाक्य में एक ही प्रकार की सूचना निहित हो।
4. सूचनाओं को सरल, सबल और स्पष्ट वाक्य में लिखा जाना चाहिए।
5. लेखन में पुरे नाम काही प्रयोग करना चाहिए। नाम और पदों को बार-बार लिखने से प्रवाह नष्ट हो जाता है।
6. लेखन के समय केवल उन्हीं शब्दों का प्रयोग करना चाहिए जो आवश्यक हो जितने कम शब्दों का प्रयोग किया जाए उतना अच्छा है।
7. रेडियो समाचार में दिनांक, माह या साल का नाम देने की उपेक्षा जहाँ तक हो सके आज, कल, परसों अथवा सोमवार, मंगलवार आदि दिनों के अनुसार शब्दों को प्रयोग करना चाहिए।
8. रेडियो की भाषा में मोटी-मोटी गिनती की जगह संक्षिप्त अंको में बात कही जानी चाहिए। जैसे 2 लाख 49 हजार टन को लगभग अढ़ाई लाख।
9. रेडियो में कही शब्दों का प्रयोग नहीं किया जाता। जैसे- उपर्युक्त, पूर्वोक्त, क्रमशः, यथा आदि।
10. रेडियो में समय सीमित होता है इसलिए समय की सीमा में रहते हुए महत्त्वपूर्ण बातों को प्रसारित करना चाहिए।
11. रेडियो श्राव्य माध्यम है इसलिए यह उचित माना जाता है कि उसमें दृश्यात्मक शब्दों का प्रयोग न किया जाए। कहने का तात्पर्य है की, अवलोकनीय, दर्शनीय आदि शब्दों का प्रयोग नहीं किया जाना चाहिए।
12. रेडियो में नकारात्मक दर्शनीय आधी शब्दों का प्रयोग नहीं किया जाना चाहिए।
13. रेडियो में नकारात्मक भाषा का प्रयोग नहीं किया जाना चाहिए। बैठक आज नहीं होगी की जगह बैठक स्थगित हो गई कहना उपयुक्त माना जाता है।

## रेडिओ कैरियर के अवसर

जब कोई रेडिओ कैरियर के अवसर ओ के बारे में सोचता है तूडीजेज की स्थिती अक्सर दिमाग में आती है जैसे की रेडिओ व्यक्तित्व। ये स्थिति सामान्य हैं, लेकिन इन्हें प्राप्त करना मुश्किल हो सकता है, और स्थिती को सुरक्षित करने के लिए उम्मीदवार को उचित मात्रा में अनुभव की आवश्यकता होगी। हालांकि, अन्य रेडिओ कैरियर के अवसर मौजूद हैं और कुछ पूरी तरह से हवा में उड़ने या बात करने के लिए असंबंधित हैं। विज्ञापन विशेषज्ञों विक्री कर्मचारियों को लगभग हमेशा रेडिओ स्टेशनों की आवश्यकता होती है, जैसा की खाता अधिकारी, बोर्ड ऑपरेटर, निर्माता, उत्पादन सहाय्यक और यहाँ तक की ऐसे इंटरन भी हैं। जिन्हें किसी रेडिओ स्टेशन के आंतरिक कामकाज को सीखने के लिए भुगतान किया जा सकता है यानहीं भी किया जा सकता है।

विपणन कर्मचारी स्टेशन के लिए ब्रैंडिंग उत्पाद या लोगो बनाएंगे। इसमें बैनर, पोस्टर, प्रिंट मीडिया में विज्ञापन यहाँ तक की ब्रोशर जैसे भौतिक विज्ञापन शामिल हो सकते हैं, लेकिन रेडिओ के लिए सामग्री बनाना विपणन विभाग के लिए प्राथमिक जिम्मेदारी होगी। इन रेडिओ कैरियर के अवसरों में विपणन निर्देशक, सहायक इंटरन साथी विक्री और इवेंट स्टाफ शामिल हो सकते हैं। इवेंट स्टाफ स्टुडिओ के बाहर की घटनाओं के लिए एक डेयज या अन्य व्यक्तित्व के साथ आम जनता के साथ बातचीत करेगा और रेडिओ स्टेशन के ब्रॉडका विज्ञापन करेगा, मार्केटिंग में रेडिओ कैरियर के अवसर अक्सर निचले स्तर के पदों जैसे की इवेंट स्टाफ के साथ शुरू होते हैं।

लेखा रेडिओ कैरियर के अवसर लगभग हमेशा उपलब्ध हैं। रेडिओ स्टेशन चलाना एक जटिल प्रयास हो सकता है और धन की निगरानी सावधानी पूर्वक करने होगी। लेखाकार या लेखा टीम काम यह सुनिश्चित करना होगा की व्यवसाय लाभ कमा रहा है, ऋणी की निगरानी बिलों भुगतान, बजेट लिखना और पूरे वित्तीय वर्ष में उन बजेटों का प्रबंधन करना, इन पदों के लिए लेखांकन, गणित या व्यवसाय में कॉलेज की डिग्री की आवश्यकता होती है। कुछ रेडिओ स्टेशन एक स्वतंत्र लेखा फर्म के लिए लेखांकन कर्तव्यों को आउटसोर्स करने का चयन करते हैं, जब कि बड़े स्टेशनों के स्थान पर एक लेखा विभाग होने की संभावना है। बोर्ड ऑपरेटर एक तकनीशियन है तो प्रसारण के दौरान साउंड बोर्ड और अन्य संबंधित उपकरण चलाते हैं। एक डीजे इन कर्तव्य में कुछ के लिए जिम्मेदार होने की संभावना है लेकिन एक बोर्ड



ऑपरेटर या तकनीशियन का उपकरण पर आर्थिक नियंत्रण होगा औरयहा तक की उस उपकरण के रखरखाव और मरम्मत के लिए भी जिम्मेदार हो सकता है। निर्माता वे लोग हे जो रेडिओ शो के दैनिक कार्यों की देखरेख करते है,और वह स्टेशन के लिए के बोर्ड ऑपरेटरों डीजेज के साथ काम करेंगे। निर्माता रेडिओ शोके तकनिकी पहलुओं जैसे शेड्युलिंग, टायमिंग, प्लेलिस्ट आदि से भी निपटेंगे।

## रेडिओ और रेडिओ जॉकी।

एफ. एम. रेडिओ और इसकास्थानीय करण यानी स्थानीयहोते हुएवैश्विकबने रहनावहभीसिर्फएकजरिया या गीत, संगीत के बल्ल भुते कमचुनौती भरा नही है, किसीभी रेडिओ स्टेशन के लिएश्रोताओकोमनोरंजित करना और इस महत्वपूर्ण एवं चुनौतीपूर्ण कार्य की जिम्मेदारी रेडिओ जॉकी के उपर होती है। रेडिओ जॉकी जो एक रेडिओ टॉक शो होस्ट करता है, जहाँ वह श्रोताओ को मनोरंजित करने की उत्कंठा धून उनके कार्य के प्रति अथाह समर्पण का प्रतिक है। हम सभी को कार्य के प्रति इनके जज्बे से प्रेरणा लेनी चाहिए। अवज की कलातमकता के साथ- साथ अपने शो को जीवन और दिलचप बनाना चाहे, वो हसी या विनोद जरिए हो या फिर सामाजिक विषय पर शास्त्रस्त्र कर ये सिर्फ और सिर्फ रेडियो जॉकी ही कर सकते हैं। इनकी बातों के साथ संगीत और भी संगीतमय हो जाती है।

### रेडिओ जॉकी बनाने के लिए योग्यता

1. छात्र ने कम से कम किसी भी विषय मे बारावी कक्षा पास की होनी चाहिये।
2. कॅडिडेट ने न्यू प्रोग्राम व ब्रॉडकास्ट मॅनेजमेंट मे डिप्लोमा कोर्स किया हो।
3. या कॅडिडेट ने रेडिओ प्रोडक्शन और रेडिओ जॉकी में डिप्लोमा किया हो।
4. या रेडिओ जॉकी मे सर्टिफिकेट कोर्स किया हो।
5. कॅडिडेट के कम्युनिकेशन स्किल्स बहुत अच्छे होने चाहिए ये और हाजिर जवाब भी हो।

### आयुसीमा:-

1. कॅडिडेट की कम से कम उम्र 18 साल होनी आवश्यक है।
2. अधिकतम आयु सीमा नहीं है।



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## रेडियो जाँकी के कार्य

- 1) रेडियो पर समाचार सुनना।
- 2) म्युजिक प्रोग्राम प्रस्तुत करना।
- 3) किसी भी प्रोग्राम को बहुत ही ज्यादा रचनात्मक तरीके से लोगों को सुनना जिससे लोगों को उसमें इंटरेस्ट पैदा हो।
- 4) रेडियो पर आने वाले किसी भी प्रोग्राम की स्क्रिप्ट राइटिंग करना।
- 5) रेडियो एडवर्टाइजिंग करने के साथ-साथ ऑडियो मैगज़ीन और डॉक्युमेंट्री पेश करना।
- 6) देश विदेश में घटने वाली घटनाओं के बारे में लोगों को जागरूक करना।
- 7) देश की सांस्कृतिक गतिविधियों को रेडियो पर रोचक तरीके से प्रस्तुत करना।
- 8) अपने द्वारा प्रस्तुत किये जाने वाले शो को इन्फॉर्मेटिव तरीके से पेश करना।
- 9) शो के दौरान एक ही समय में हर उम्र के लोगों को एंटरटेन करना।
- 10) मिमिक्री और हँसी मजाक से लोगों का मनोरंजन करना।



### लिखना और प्रस्तुतीकरण :-

रेडियो जॉकी अपनी स्क्रिप्ट स्वयंम लिखता है, इसलिए अपने प्रोग्राम को रोमांचकारी बनाने के लिए

उसको अपने प्रोग्राम को रोमांचकारी बनाने के लिए उसको अच्छी तरह से लिखने की कला आनी चाहिए। आपको इसी के साथ अपनी बात को प्रस्तुत करनेका तरीका अच्छा होना चाहिए, जिसके माध्यम से आपको दूसरों को प्रभावित करना होता है।

### मजाक करने की आदत :-

एक रेडियो जॉकी के रूप में अपने श्रोताओं का मनोरंजन करना होता है, जिससे वह आपके बातों

पर विशेष ध्यान देते रहे, उनको कभी भी आपके प्रोग्राम में बोरियत नहीं लगनी चाहिए, इसलिए आपको

अपने प्रोग्राम को मजेदार बनाना चाहिए।

### क्रिएटिव होना :-

रेडियो जॉकी को क्रिएटिव होना चाहिए, जिससे वह अपनी स्क्रिप्ट को नए तरीके से लिख सकें और

अपने कार्यक्रम को नया रूप दे सके, जिससे श्रोताओं को कुछ नया सुनने को मिले।

## निष्कर्ष

रेडियो का माध्यम समाचार पत्र से भिन्न होता है। रेडियो की हमारे समाज में एक महत्वपूर्ण भूमिका है। रेडियो सुनने के लिए अमीर-गरीब, शिक्षित-अशिक्षित व्यक्तियों के लिए तो रेडियो एक वरदान की तरह है। रेडियो, रेडियोतरंगोंद्वारा ध्वनिसंचार, जैसे संगीत, समाचार, और एकल प्रसारण स्टेशनों से अन्य प्रकार के कार्यक्रमों के प्रसारण के माध्यम से रेडियो को अलग-अलग श्रोताओं तक पहुंचाई गई। 20 वीं शताब्दी में रेडियो ने आश्चर्य जनक रूप से प्रसारित हुआ और जनता को समाचार और मनोरंजन प्रदान किया।

समाचार व मनोरंजन के साथ रेडियो ने श्रोताओं के बीच अपनी गहरी पहुंच बना ली है। साथ ही उसने समाज व जन मानस में अपनी लोक प्रियता को भी पहला पहलू दिया है। रेडियो ने अपनी सेवाओं का लाभ सम्प्रेषित करने के उद्देश्य से व्यावसायिक रूप लिया और रेडियो की 'विज्ञापन प्रसारण सेवा' कॉमर्शियल रेडियो के रूप में पनपी। इस सेवा में छोटे-बड़े उद्यमियों, स्वरोजगार रत लोगों व उत्पादों को स्थान मिला साथ ही कम शुल्क में अधिक लोगों तक पहुंच का जरि या भी मिला। यही कारण है की रेडियो प्रचार-प्रसार का जरि या भी बड़ा रूप में है। वर्तमान रेडियो जिंगल भी इस काय ही स्वरूप दर्शाता है।

रेडियो जॉकी का कार्य सिर्फ रेडियो शो करना नहीं होता, वह प्रोग्रामिंग, स्टोरी राइटिंग, रेडियो एडवर टाइजिंग करने से लेकर ऑडियो मैगजीन और डॉक्यूमेंट्री भी प्रस्तुत करना होता है। सबसे पहले तो आप को यह समझना होगा कि रेडियो जॉकी की जॉब ऑफिस टाइम की रेगुलर जॉब नहीं है। यहां आपको दिन या रात कभी भी शो होस्ट करना होता है। साथ ही रेडियो जॉकी को न सिर्फ देश-विदेश में होने वाली गति विधियों की जानकारी होनी चाहिए बल्कि उसे अपने शहर की सांस्कृतिक गतिविधियों के बारे में भी पता होना चाहिए ताकि वह अपने शो को और भी बेहतर व इंफॉर्मेटिव बना सके।

"ज्ञान, विज्ञान और सुसंस्कार इसके लिए शिक्षणप्रसार।"

-शिक्षणमहर्षी डॉ. बापूजीसाळुंसे



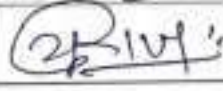
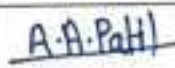
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.प्रमाणपत्र .

शैक्षणिक सत्र - 2021-22

यह प्रमाणित किया जाता है कि निम्नलिखित छात्रों ने विवेकानंद कॉलेज, कोल्हापुर द्वारा ऐच्छिक हिंदी बी.ए.भाग-3 के निर्धारित आवश्यक परियोजना कार्य को संतोष जनक ढंग से किया है।

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सहाय्यक प्राध्यापक

डॉ. दीपक तुपे

हिंदी विभागाध्यक्ष

डॉ.आरिफमहात

प्राचार्य

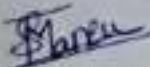
डॉ.आर. आर.कुंभार



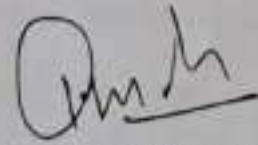
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**Vivekanand college , Kolhapur (Autonomous)**  
Department of English

Roll No.	Name	Name
5416	Bhalekar Shivani	An analysis of selected characteristics in Metaphysical Poetry
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5418	Chavan Preeti	Salient features of Romantic Poetry
5419	Chaugale Rohit	<i>Kubla Khan</i> as a romantic poem by S.T. Coleridge.
5420	Darure Tejashri	
5421	Fase Pratik	
5422	Ghasate Sonam	Social problems and moral values in Jane Austen's <i>Pride and Prejudice</i>
5423	Gorav Tejas	A Stylistic Analysis of Coleridge's <i>Kubla Khan</i>
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(Dr. Salama Maner)  
Subject teacher



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# Social Problems and Moral values in Jane Austen's Pride and Prejudice

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## Abstract

The objectives of this study are to find out the social problems presented in the novel Pride and Prejudice and to reveal the moral values in this novel. The data of this study were from the novel Pride and Prejudice, and the structural approach was used in this research.

Two major subjects are found: social Problems and moral values. The first concerns women's position, a gap between the upper and lower classes, and matchmaking. In Pride and Prejudice, women are portrayed as being weak. They have no economic independence. In marriage, they tend to marry for property and security. For this, they will marry a man who is very rich and marry for a comfortable home. Women are also expected to be always beautiful and accomplished. A gap of the upper and the lower classes can be seen through the social manner of the upper class toward the lower. Forbidden marriage among people of the upper and the lower class is another case in this. Meanwhile, matchmaking among the members of the upper and among the persons from different classes can be seen another social problem. The second concern the facts that one should not judge a person by appearance; one cannot force another; pride of someone can cause prejudice of someone else; and it is not easy to understand one's character. The following moral values are found: one can make friends with anybody though different in characters; experience is a good teacher; regrets always come late; parent's teaching to children can influence personality in adults; reading books can make people wise; and wealth and rank can cause people to be haughty and selfish. The next moral values concern the facts that one should love

and give affection to one's siblings and that marriage by sex, beauty, and youth. instead of morality, love and intelligence results in unhappiness.

## **Key terms**

1. Social problems
2. Moral values

### 1. Social Problems

1. Women's problem
  - a) Economic independence
  - b) purpose of marriage
2. Gap between the upper and lower class
  - a) People lives in marriage
  - b) Dictatorial
  - c) Proud
  - d) Insulting to lower class people
  - e) Forbidden marriage among people of the upper and the lower class
  - f) Matchmaking

### 2. Moral Values

1. Social relationships
  - a) Judgment by appearance
  - b) Understanding one's character
2. Personality
3. Marriages

## **Introduction**

We are going to study in this research paper the ways that will show us the social problems and moral values in Jane Austen's novel *Pride and Prejudice*.

Jane Austen was an English novelist, born in 18<sup>th</sup> century. English writer who first gave the novel its distinctly modern character through her treatment of ordinary people in everyday life. Austen's plots often explore the independence of women on marriage in pursuit of favorable social standing and economic security. The data of the study is from the novel "*Pride and Prejudice*" and the structural approach was used in this research.

### **Objective of the study –**

1. To find out social problems present in "*Pride and Prejudice*"
2. To reveal the moral values in "*Pride and Prejudice*"

### **Hypothesis –**

In this study we assume that Jane Austen presented social problems of society and also she discusses about the Moral value in her characters.

## **1. Social problems-**

A social problem means a question that needs to be solved or decided in relation to human being who lives in a certain community. The problems may include all facet of like injustice, racism, discrimination, etc in other word; social problem is every problem or difficulties which happen in the social life or certain community as the relations around peoples. It needs to be solved or at least be minimized.

## **2. Moral Values**

The word 'moral' has a meaning which concern principles of right or wrong behaviors. A value generally means a quality of being useful or worthwhile or important whereas values mean professional standards of behavior.

Moral values in literature then mean the principles of right or wrong behaviors which are worthwhile and important in a literary work to be conveyed to the readers to improve their morality in life.



## **Social problems**

### **1. Women's problem –**

#### **a) Economic independence –**

Women in pride and prejudice are being weak in financial affairs. They have no economic independence. Meanwhile, men are being authoritative in the family. Entertainment in pride and prejudice is a case that proves that women have no economic independence. In entailment, there is no chance from the female line. It is conversely, always from the Male line. It means that women do not get heritage from their own parents.

#### **b) Purpose of marriage**

In marriage, women also weak in the position relate to poverty. They are depending very much on their husband. As shown in pride and prejudice women get married with the consideration only of poverty security as the foundation.

## **2. Gap between the Upper and Lower Classes -**

### **1. People Live In Society-**

In the society, they live with many differences from one another. They can be different in character, education, profession, wealth, family, etc. Differences in society usually reveal classes in the society. People of good wealth, income, fortune, and education, are consider comprising the upper class. Meanwhile, people of poor family, little education, or low connection are consider to comprise the lower class.

## **2. Dictatorial-**

Lady Catharine, who is considered as belonging to the upper class, is behaving as if she is having authority over others, especially over the people considered as belonging to the lower class. The character is described by Wickham as follows.

## **3. Proud -**

Pride of them is also the character usually owned by the people of the upper class. Lady Catherine is proud of herself and it can be seen through her treatment toward the people of the lower class. Coming to Longbourn, she is very proud in her manner.

## **4. Insulting to Lower class people -**

Having good wealth and income and considered as people from the upper class, Miss Bingley and Lady Catherine tend to insult the lower class. They insult Elizabeth and her family of having only low connection and of having no fortune. Miss Bingley insults Elizabeth when Darcy seems to fall in love with her and consider the prospect if they get married. She insults Elizabeth's mother by saying:

“ I hope , ' said she ,as they were walking together in the shrubbery the next day,' you will give your mother - in -law a few hints, when this desirable event takes place ,as to the advantage of holding her tongue ; and if you can compass it , do cure the younger girls of running after the officers. And if I may mention so delicate a subject, endeavor to check that little something , bordering on conceit and impertinence, which your lady possesses”

## **5. Forbidden marriage among people of the upper and the lower class -**

The class gap in society is not only found in the social manner of the upper to the lower class people, but also in marriages across the classes. The practice of such a marriage, however, happens in *Pride and Prejudice*. It is the one between Darcy and Elizabeth. The former is a man having a large fortune of a large estate. The latter is considered as having no fortune. She has only low connections. It is also the marriage between Bingley and Jane. When these marriages happened, especially the marriage of Darcy and Elizabeth, many characters in the novel are represented as having objections. They are Lady Catherine de Bourgh, Mr. Collins, Wickham and Lydia.

## **6. Matchmaking-**

Parents always want to see their children live in happiness. For this, parents may do many things to help their children bring into reality their wish to live in happiness. They may give their children as much experience and knowledge as possible to prepare for the future.

In relation to marriage, some parents may choose a match for their son/daughter. They may involve themselves in matching for their son or daughter in the hope that their son or daughter will obtain the happiness.

The practice of matchmaking is found in *Pride and Prejudice*. There are two kinds of matchmaking as discussed in this study. One is the matchmaking between persons considered from the upper and upper class. The other is the matchmaking between persons considered from the low and high class. The first kind of matchmaking is between Darcy and Miss de Bourgh whereas the second is between Bingley and Jane and between Darcy and Elizabeth.

## **Moral values found in pride and prejudice --**

Moral values in pride and prejudice are divided into 3 categories. They are social relationships, personality, and marriage. Each of these three categories consist of subcategory is discussed below.

### **1 . Social relationships**

#### **a) Judgment by appearance-**

When someone meets other in a street, office, market, or a party, it is possible that he/ she gives a value or makes judgment about them. It is usually done explicitly.

Jane Austen conveys a moral value that one should not judge a person by appearance only through the character of Mr. Darcy and Mr Wickham. The two persons are the two men whom Lizzy is close to. In this novel , Elizabeth and the people around her including her own family are mistaken about the two persons.

#### **b) Understanding one's characters**

To understand means to be aware of something or someone. It can also mean to know how to deal with something or someone.

The difficulty in understanding one's character is portrayed in pride and prejudice by Mrs. Bennet in the case of understanding her husband, by Elizabeth in understanding Darcy, and be the conversation of Elizabeth and Charlotte in observing Bingley in relation to Jane.



## **2. Personality**

Often people can do something better from a bad experience and finally get their success. Therefore an, an experience, thinks quite bad, can be learned as a lesson or can be taken as a good teacher.

It is also narrated that Mr. Bennet takes a lesson from Lydia's elopement by being more careful in taking care of his daughter. Though Lydia often invites Kitty and promises balls, he never let her go.

Pride and prejudice presents three persons that the writer of this thesis consider to be one's that get masticating in their childhood and get the effect the character of someone.

Darcy as described in the novel is a son of the late Mr. Darcy who has a very large fortune. Nevertheless, his parents epecially his father mist taught him when he is a child. The effect of this is that in his adulthood he because he becomes selfish and proud in his character.

## **3 ) Marriage**

Before one decide to get married, he/ or she must have many considerations or reasons. The reason or consideration may be different from each other. One may get married to continue his/her generation or to have children. Others may get married to achieve happiness in life by forming a family. Someone else may want to come into marriage because of sex or great passion. Beauty and youth may be the other reasons that make people decide to get married. Because he/ she is young and having beauty and finding the match that is also still young and beautiful in performance, he / she then comes into a marriage.

In pride and prejudice , this case about marriage because sex, youth and beauty is portrayed. Besides, the marriage because of moral and intelligence is also represented. The first kind of marriage results in happiness whereas the second can achieve the happiness. The husband can improve his moral in live and the wife can get her liberty as an intelligent and moral women on marriage .

## **Conclusion –**

The main objectives of this study are to find out the social problems and moral values presented in the novel *Pride and prejudice*. The data are all the paragraphs found in the novel.

In the case of the social problems found in *pride and prejudice* three categories of social problems can be found. The three categories are women's position, gap between the upper and lower classes and Matchmaking.

In relation to moral values found in *Pride and Prejudice* three categories can be found. The first categories is of social relationship which is divided into three categories. That are one should not judge a person by appearance; Pride of someone can cause prejudice to someone else. Second category is Personality they are experience is a good teacher regrets always come late parents way of teaching can influence others reading books can make people wise.

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प्रति,  
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सहायक प्राध्यापक,  
इतिहास विभाग,  
शिवाजी विद्यापीठ,  
कोल्हापूर.

विषय: प्रोजेक्ट व्होस व्हायवा/ सादरीकरणास साधन व्यक्ती म्हणून  
उपस्थित राहणेबाबत. . .

महाशय,

वरील विषयास अनुसरून आपणाशी दुरध्वनीवरून झालेल्या संभाषणान्वये या  
महाविद्यालयात इतिहास विभाग बी.ए.भाग-३ सत्र ६ च्या प्रकल्प वाचनासाठी साधन  
व्यक्ती व निरीक्षक म्हणून दिनांक १९.०५.२०२२ रोजी सकाळी ८ ते १२ या वेळेत  
उपस्थित राहून विद्यार्थ्यांना मार्गदर्शन करावे.

कळावे,

आपला विश्वासू,

  
डॉ. आर. आर. कुंभार  
प्राचार्य  
विवेकानंद कॉलेज  
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सहायक प्राध्यापक,  
इतिहास विभाग,  
शिवाजी विद्यापीठ,  
कोल्हापूर.

महाशय,

आपण आमच्या विनंतीस मान देऊन या महाविद्यालयात इतिहास विभाग बी.ए.भाग-३ सत्र ६ च्या प्रकल्प वाचनासाठी साधन व्यक्ती व निरीक्षक म्हणून दिनांक १९.०५.२०२२ रोजी सकाळी ८ ते १२ या वेळेत उपस्थित राहून विद्यार्थ्यांना मार्गदर्शन केले त्याबद्दल आपले महाविद्यालयाच्यावतीने आभार.

भविष्यातही अशाच सहकार्याची अपेक्षा.

आपला विश्वासू,

  
डॉ. आर. आर. कुंभार  
प्राचार्य

विवेकानंद कॉलेज  
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Project Voce-Viva


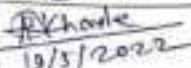
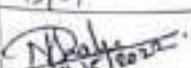
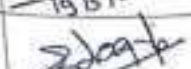
B.A.III Sem. VI - CIE- (Students Presentation of Project)



(स्वायत्त) कोल्हापूर

Date: 19/05/2022

**Report & Attendance of Referees**

Sr. No	Name of the Referee	Name of the institution	Designation	Signature
1	Prof. Umakant Hattikat	Shivaji University , Kolhapur	Asst. Prof	 19/5/2022
2	Ms. Ashwini Khavle	Vivekanand College, Kolhapur	Asst. Prof	 19/5/2022
3	Ms. Namrta Dhale	Vivekanand College, Kolhapur	Asst. Prof	 19/5/2022
4	Dr. S. R. Kattimani	Vivekanand College, Kolhapur	Head of the Dept.	

  
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इतिहास विभाग बी ए भाग - III

सत्र 6 - CIE

प्रकल्प सादरीकरण

दि. 19 /05 /2022

अ. क्रं	विद्यार्थी नाव	प्रकल्पाचे नाव	रोल नंबर	सही
1.	अंकिता कल्लाणा जाधव	जत स्थान	5544	Ankita
2.	प्रियंका विशाल अंची	बाबरीरांच्या बकिहायी	5530	Prityka
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14.	प्राजक्ता दि. महाडूम	पलाका गडाची माहिती	5550	Prajakta
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17.	साक्षी पांडुरंग किटे	जेतिबा मंदिर	5548	Sakshi

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अ. क्रं	विद्यार्थी नाव	प्रकल्पाचे नाव	रोल नंबर	सही
18	स्वप्निल वसंभाजी ठाणे	महात्म्यी महिरे	5540	
19	सुमन अथलम जभाकार	विनायक इतिहास राहट	5570	APDambar
20	सोमेश गुडभवार	कोल्हापूर जिल्हातील कुर्मी	5542	
21	सौरभ पवार	केवळनाथ बापट	5566	
22	आशिष नंदकुमार वेणुले	सांगी स्तूप	5571	
23	प्री सुभाष नाथ	कोल्हापूर जिल्हा	5545	
24	विक्रम हेमती गवड	कोल्हापूर मेजिस्ट्रिक सा.	5539	MG
25	सोमेश अनिल कंबळे	मन्नारणी तलाव	5547	S Atambar
26	प्रेडलिक अनंदा पाटील	छ. सांगी महाराज	5564	
27	धनराज शिवकी म्हापत्रे	सरसंगली लकीबाब मोहिते	5555	
28	साहित्य संजय वेणुले	दादासाहेब कोटके	5537	
29	प्रणव किशोर भावत	स्वातंत्र्यपूर्व काळातील	5569	PKJ
30	भवस राजमहंमद कल्लाण	किल्ले अजिंठा	5557	BS
31	वैष्णवी विठ्ठल निकम		5558	
32	रजनी राजेंद्र सासवडे		5567	PRASAD
33	उत्कर्षा राजेश सासवडे	विठ्ठल किर्लोस्कर	5529	
34	वसुंधरा विठ्ठल बाडीकर	मलिपट्टा लेणी	5647	
35	अरुणिका कृष्णान मोटे	किल्ले रायगड	5556	
36	प्रशमेश सुभाष इज्जतार	कनेरी महागाव	5543	

Dr. S.R. Kattimani

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"Education for Knowledge, Science and Culture"

- Shikshanmaharshi Dr. Bapuji Salunkhe

Swami Vivekanand Shikshan Sanstha's

VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR

Dept of. History

Project Voce-Viva

B.A.III Sem. VI - CIE- (Students Presentation of Project)

Date: 19/05/2022



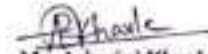
Sr.	Students Name	Project Title	Selection of topic	Data Collection	Content	Presentation of Subject	Overall Performance	Marks out of (50)	Sign
1	अंकिता शायर	जल संस्थान	8	8	8	9	6	41	
2	अरुणमतीक Rutuja Mali	विश्वभूषू मंदिर	9	8	7	9	9	42	
3	त्रिपथा अनी	पावनीखंडीची लढाई	7	8	6	6	8	35	
4	सदना	पोबादा	-	-	-	-	-	-	Ab
5	आशाळा पुष्पकोकर	नू पॅलेस कोल्हापूर	7	8	9	6	7	37	
6	साशी विठे	ज्योतिबा मंदिर	9	7	8	8	7	39	
7	शर्मिस्त गवळे	महाराष्ट्रपोलीसदाचा इतिहास	7	8	7	7	7	36	
8	सिंहल पाटील	रघुज्या ऐतिहासिक माहिती	7	7	8	7	7	36	




11	इरका मादुन	पन्हाळाचा इतिहास	8	9	8	8	7	40
	अमेय गुडपेवार	कोल्हापुरातील कुस्ती चा इतिहास	5	5	6	5	5	26
11	सौरभ पवार	बेदारनाथ मंदिर उतराखंड	8	7	8	8	7	38
12	अंकिता पडवळ	महाराष्ट्रातील अतिथिवासी घराबजळ	8	7	7	7	7	36
13	तेजस कुपवडे	जयप्रभा स्टुडिओ	9	9	9	9	9	45
14	वनिता बजरी	अवधवाची माव: सिपुलाई सपकाळ	7	7	8	8	9	39
15	प्रयंका हुतभावार	कन्नडो मंडळाचा इतिहास	7	7	7	7	7	35
16	सिद्धी चप्लोडे	मुगल स्थापनाचा इतिहास	9	9	9	9	9	45
17	अमन जबादार	विजापूरचे ऐतिहासिक शहर	5	5	6	5	5	26
18	आकाश अमवले	लाल किल्ला (दिल्ली)	8	7	8	8	7	38
19	अनिरुध्द पाटील	उजवली सभाची मंडळाज	7	8	8	7	7	37
20	शो जाधव	बंजारापूर क्रिष्णानील वैसायिक गैरधीनिक पर्यटन स्थळे	9	9	8	9	7	42
21	आशी पाटील	पूर्व महाराष्ट्रतील ऐतिहासिक स्थळे (मनिवारवाडा)	5	5	6	7	9	31

23	विकास गवड	ऐतिहासिक कोल्हापूर	9	9	9	8	8	41	
23	धनराज महाकवे	सर सेनापती हवीराव मोहिते	-	-	-	-	-	-	Ab
24	प्रणव सावंत	स्वातंत्र्यपूर्व काळातील समाजसुधारणा चळवळ	-	-	-	-	-	-	Ab
25	उत्कृष्ट अहमूळ	सिधुर्गा किल्ल्याचा इतिहास	-	-	-	-	-	-	Ab
26	वेतली पाटील	कार्गिल युद्ध	9	9	8	9	9	44	
27	सतीश चौगुले	दादासाहेब कोडके	7	7	7	7	7	35	
28	गणेश रत्नाण	कोल्हापूर जिल्हाप्रतिष्ठ अखंड परिषदा	7	8	6	6	7	34	
29	तनिधा सुतार	लहसणकी व कर्ण विहिरीचा विकास	9	8	9	9	9	42	

  
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'ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षणप्रसार'

- शिक्षणमहर्षी डॉ. बापूजी साळुंखे

श्री स्वामी विवेकानंद शिक्षण संस्था, कोल्हापूर  
विवेकानंद कॉलेज, कोल्हापूर (स्वायत्त)

मराठी विभाग

बी.ए. भाग - ३

प्रकल्प लेखन - विद्यार्थी यादी - २०२१-२२

अ.क्र.	विद्यार्थ्यांचे नाव	प्रकल्प शीर्षक	मार्गदर्शकाचे नाव
१.	राहुल विष्णू साळुंखे	रेडीओ	डॉ. स्वप्नील बुचडे
२.	सिद्धार्थ तानाजी गुरव	प्रमाणभाषा व बोलीभाषा	डॉ. स्वप्नील बुचडे
३.	शुभम प्रकाश कदम	काव्यानंदमीमांसा	डॉ. प्रदीप पाटील
४.	फरदीन शानेदिवान	पर्यावरणीय साहित्य	डॉ. स्वप्नील बुचडे
५.	सचिन हरुगडे	बखर वाङ्मय	डॉ. प्रदीप पाटील
६.	अनिकेत बाजीराव लोखंडे	रेडीओ	डॉ. स्वप्नील बुचडे
७.	रोहित संतोष कचरे	प्रमाणभाषा व बोलीभाषा	डॉ. स्वप्नील बुचडे
८.	दिपाली रंगराव आडूळकर	काव्यानंदमीमांसा	डॉ. प्रदीप पाटील
९.	नदीम सय्यद	पर्यावरणीय साहित्य	डॉ. स्वप्नील बुचडे
१०.	समर्थ सतीश साळुंखे	बखर वाङ्मय	डॉ. प्रदीप पाटील
११.	प्रतिक उमाजी सातपुते	रेडीओ	डॉ. स्वप्नील बुचडे
१२.	आशा खोपकर	काव्यानंदमीमांसा	डॉ. प्रदीप पाटील
१३.	धनश्री घाडगे	बखर वाङ्मय	डॉ. प्रदीप पाटील
१४.	स्नेहा प्रबुद्ध कठारे	प्रमाणभाषा व बोलीभाषा	डॉ. स्वप्नील बुचडे

प्रा. डॉ. प्रदीप पाटील



'ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षणप्रसार'  
- शिक्षणमहर्षी डॉ. बापूजी साळुंखे



श्री स्वामी विवेकानंद शिक्षण संस्था, कोल्हापूर

संचालित

विवेकानंद कॉलेज, कोल्हापूर (स्वायत्त)

मराठी विषयासाठी सादर करण्यात आलेला शोधप्रकल्प

शीर्षक

काव्यानंदमीमांसा

मार्गदर्शक

प्रा. डॉ. प्रदीप पाटील

अभ्यासक

कु. शुभम प्रकाश कदम (बी. ए. भाग - ३)

कु. सिद्धार्थ गुरव (बी. ए. भाग - ३)

कु. सचिन हरगुडे (बी. ए. भाग - ३)

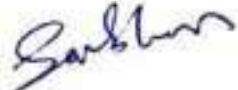
कु. राहुल साळुंखे (बी. ए. भाग - ३)

कु. फरदिन शानेदिवाण (बी. ए. भाग - ३)



## प्रतिज्ञापत्र

मी कुमार शुभम प्रकाश कदम. वर्ग - बी.ए. भाग - ३ विषय - मराठी  
असून, असे लिहून देतो की, काव्यानंदमीमांसा या शोधप्रकल्प, प्रा.डॉ. प्रदीप  
पाटील यांच्या मार्गदर्शनाखाली मी स्वतः अभ्यास करून लिहिला आहे. तो  
इतर कोणत्याही पदवी-परीक्षासाठी सादर केलेला नाही

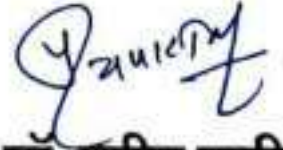
  
- शुभम प्रकाश कदम,  
(अभ्यासक.)

स्थळ : कोल्हापूर.

दिनांक :     /     /     .

## प्रमाणपत्र

प्रमाणित करण्यात येते क, कुमार शुभम प्रकाश कदम, ब.ए. भाग - ३, याने पेपर क्रमांक १२ काव्यशास्त्र या विषयातील काव्यानंदमीमांसा या विषयावरील शोधप्रकल्प माझ्या मार्गदर्शनाखाली पुर्ण केला आहे. याच्यापूर्वी हा शोधप्रकल्प कुठे ही प्रकाशीत करण्यात आला नाही. त्याबद्दल हे प्रमाणपत्र देण्यात येत आहे.



- प्रा.डॉ. प्रदीप पाटील,  
(मार्गदर्शक.)

स्थळ : कोल्हापूर.

दिनांक :     /     /     .

## ऋणनिदेशक

मी शुभम प्रकाश कदम, माझा, विवेकानंद कॉलेज कोल्हापूरमध्ये वर्ग - बी. ए. भाग - ३ व विषय - मराठी असून, माझा सदर शोधप्रकल्प काव्यानंदमीमांसा हा आहे.

प्रस्तुत काव्यानंदमीमांसा हा प्रकल्प लिहित असताना, पर्यायी मला अनेकांचे मार्गदर्शन आणि प्रकल्पास अनुकूल मदत लाभली. त्यामध्येही काही विशिष्ट व्यक्तींचा विशेष उल्लेख प्रस्तुत प्रकल्पामध्ये मी करू इच्छितो. या उल्लेखनिय व्यक्तींशिवाय सदर शोधप्रकल्प अपूर्ण ठरले.

प्रस्तुत प्रकल्पासाठी मला, विवेकानंद कॉलेजमधील मराठी विभागातील प्रा. डॉ. प्रदीप पाटील सर आणि डॉ. स्वप्नील बुचडे सर व, माझ्या परिवाराचे उत्तम आणि योग्य मार्गदर्शन लाभले.

विवेकानंद कॉलेजमधील विद्यार्थी तथा माझे शुभचिंतन व विशेष उल्लेखनीयपैकी - स्नेहा काठारे, दिपाली आडुळकर, तसेच राहूल साळुंखे, सिध्दार्थ गुरव, फरदीन शानेदिवाण आणि सचिन हरगुडे. इतरांचे सहकार्य आणि वेळ-प्रसंगी प्रकल्पास अनुकूल मदत मला मिळाली.

वरील विशेष उल्लेखनीय व्यक्तींचे मार्गदर्शन आणि मदत, सहकार्य तसेच, माझ्या संशोधन आणि अभ्यासमुळे हा शोधप्रकल्प मी पूर्ण केला आहे.

- शुभम प्रकाश कदम,  
(अभ्यासक.)

## काव्यानंदमीमांसा - अर्थ

### प्रस्तावना

काव्यानंदमीमांस ' या प्रस्तुत प्रकल्पामध्ये काव्यनिर्मीती आणि त्यांच्या प्रकारांचा अभ्यास आहे. काव्य च्या विविध प्रयोजनानपैकी स्वतःताला होणारा आनंद हा एक **सर्वश्रेष्ठ** प्रयोजन असते. हे प्रयोजन **द्विवेदी** स्वरूपात आहे. एक काव्यनिर्मीती करणाऱ्या लोकांना, आणि दूसरे काव्याचा आस्वाद घेणाऱ्या वाचक रसिकांना होणाऱ्या आनंदाचा प्रस्तुत प्रकल्पामध्ये अभ्यास आहे.

" नेमका मानवी आनंद कसा असतो ?" याचे परिपूर्ण वर्णन आपल्याशब्दाच्या स्वरूपात सांगता येणे अशक्यच आहे. अर्थात, आनंद या मानवी भावनेची लक्षणे समजून घेणे इतकेच आपण साधू शकतो.

प्रस्तुत प्रकल्पास अधिक समजून घेण्यासाठी, काव्यानंदमीमांसा - अर्थ अभ्यासू.





काव्यानंद म्हणजे काव्यनिर्मिती करत असताना लेखकाला आणि काव्य-वाचन करत असलेल्या वाचकास होणारा आनंद आहे.

जगभरातील विविध थोर विचारवंत आणि व्यासंगी अभ्यासकांनी याचे अस्तित्व मान्य करून, याचा अभ्यास आणि याचे प्रकार स्पष्ट केले आहे. थोर विचारवंत - हर्बर्ट स्पेन्सर, आय. ए. रिचर्डस, व अरिस्टॉटल इत्यादी पाश्चात्य, तर माधव ज्युलियन, ना.सी. फडके, कृ.पा. कुलकर्णी. इत्यादी थोर भारतीय अभ्यासकांनी या आनंदाचे प्रकार आणि महत्त्व स्पष्ट केले आहे.

मानवाचे बहुतांशी कार्य हे आनंद ही भावना प्राप्त करण्यासाठीच असते. नृत्य, संगीत, मनोरंजन, धंदा - जोपासना, वाचन, प्रवास, इत्यादी कार्याच्यामागे बहुतांश आनंद हाच एक मुख्य प्रयोजन असतो.

मानव त्याच्या दैनंदिन जीवनामध्ये आनंद ही भावना प्राप्त करण्यासाठीच इच्छुक असतो. आपल्या जीवनात विविध अडचणी, कर्तव्ये, जबाबदारी, आणि गरज या गोष्टींची सांगड घालण्यातच मानवी आनंदावर थोडी मर्यादा येतात. तोच आनंद-पुर्ती करण्याहेतू, मानव विविध आवड आणि धंदाची जोपासना करतो. काव्य-वाचन आणि त्याची रचना करण्यामागे देखील प्रयोजन अथवा हेतू हाच असतो.

कधी आपल्या नियमित कार्यापासून काही क्षण दुर होऊन सुःखांत आणि समाधानी वाटण्याजोगे आनंद., तर कधी नवीन ज्ञान, माहिती, अनुभव प्राप्त करण्याची ओढ किंवा जिज्ञासा. इत्यादी प्रकारे, काव्यवाचक आणि काव्यलेखकांना समग्र आनंद मिळत असतो.

## विषय परिचय

आनंद ही मानवी भावना काव्याच्या प्रयोजनापैकी एक **सर्वोत्तम** प्रयोजन आहे.



काव्यानंद प्रयोजन द्विविध स्वरूपाचे आहे. काव्यनिर्मिती करणाऱ्या लोकाला, आणि काव्याचा आस्वाद घेणाऱ्या, वाचन करणाऱ्या रसिकांचा आनंद आणि त्यांचे प्रकार पुढे अभ्यासू.

## क्रिडानंद

साहित्य, लेखन, काव्य, ही एक कला आहे. क्रिडावादी व्याक्तींचे विचाराने सर्व कला म्हणजे क्रीडा आहेत.

जगप्रसिद्ध अभ्यासकांच्या मते कवीला अथवा लेखकाला होणारा आनंद म्हणजे क्रीडामध्ये होणारा आनंद असे म्हणावयास हवे. त्यामध्ये एक महान आणि जगप्रसिद्ध विचारवंत : हर्बर्ट स्पेन्सर यांच्या मते : " जीवनामध्ये जीवनास आवश्यक असणारी जीवनशक्तीचा वापर करून ( खर्च होऊन ) जी अधिक जीवनशक्ती माणसांमध्ये शेष राहाते, तिचा विनियोग होण्याचा मार्ग म्हणजे त्यामाणसांमध्ये असलेली क्रीडावृत्ती होय. "

दररोजच्या दैनंदिन परिपाठामध्ये कवीला नियमित श्रम करावे लागत असेल तर, तो काव्यरचना करू शकणार नाही. जेव्हा आवश्यकतेपेक्षा अधिक श्रम त्याला करावे लागणार नसेल., तेव्हा आपल्या जीवनशक्तीस वाव देण्यासाठी तो काव्यरचना करू शकेल. इत्यादी कारणांमुळे होणारा जो मानवी आनंद असतो तोच, क्रिडानंद होय.



## समधातता

समधातत ही उपपत्ती महान विचारवंत आणि थोर अभ्यासक आय.ए. रिचर्डस यांनी मांडली आहे. त्यांच्या मते : " भावनांचा खेळ आपल्या दररोजच्या व्याहारातसुद्धा चालू असतो. मात्र, त्यामध्येही कोणताही व्यवस्था नसते. काव्य-वाचनामुळे अनुभवास येणाऱ्या भावांमध्ये एक विशिष्ट प्रकारची वेगळी व्यवस्था असते. म्हणूनच त्या काव्यचा आपल्याला आनंद होतो."

भावनांच्या या व्यवस्थेत रिचर्डस यांनी समधातता असे नाव दिले आहे. ज्यामध्ये सर्व सुःखांचे आणि दुःखांचे एक समतोल ( Balance ) असतो. असा विचार गृहीत धरलेला आहे.

मानवीच जीवनामध्ये समतोल असेल तर, ते जीवन समृद्ध आणि सुःखांत होते. त्या जीवनाचा तोल गेला की, मात्र त्याचे स्वरूप आणि रूपांतर दुःखात परिवर्तित होते. इत्यादी मानवी भावना नेहमीच्याच असतात. परंतु, त्यांना कार्य करण्यास विषय देवून त्यांचा खेळ करून, त्याची संगत व्यवस्था या आय.ए. रिचर्डस यांच्या समधाततेत पाहावयास मिळते.

नेहमीच्या दैनंदिन जीवनामध्ये सकारात्मक आणि नकारात्मक, यांचा समतोल साधून काव्यनिर्माती आणि काव्य वाचन करणे म्हणजेच आय.ए. रिचर्डस यांचा समधातता हा सिद्धांत होय.



## जिज्ञासापूर्ती

जिज्ञासापूर्ती ही उपपत्ती महान **भारतीय** विचारवंत आणि थोर **कवी** - **माधव ज्युलियन ( माधव त्रिंबक पटवर्धन )** यांनी मांडली आहे.

जिज्ञासापूर्ती म्हणजे **कुतूहलपूर्ती** होय. विविध आणि विशिष्ट नवीन ज्ञान, अनुभव, माहिती, यांचे काव्यानंदातील अस्तित्व आणि महत्त्व लक्षात घेऊन जिज्ञासापूर्ती या काव्यानंदाच्या प्रकाराला अभ्यासामध्ये सामाविष्ट करून **प्राधान्य** दिले आहे.

**डॉ. माधवराव पटवर्धन** यांनी जिज्ञासापूर्ती हा काव्यानंदाचा **गाभा** आहे असे मत व्यक्त केले आहे.

इतर माणसांपूर्ती अथवा माणसांविषयक मनुष्याला असलेलं कुतूहल हे स **स्वाभाविक** आणि **प्रभावी** असतं. या मानवाविषयक कुतूहलच्या पूर्तीलाच काव्यानंदमीमांसामध्ये खूप महत्त्वाचे स्थान आहे. विविध विचारवंत आणि अभ्यासकांनी देखील हा प्रकार मान्य केला आहे, असे दिसते. सारांश, काव्य वाचन करणाऱ्या वाचक वर्गाचा आणि रसिकांचा मुख्य प्रयोजन हा बहुतांश वेळी जिज्ञासापूर्ती हाच असतो.

## प्रत्याभिज्ञा

प्रत्याभिज्ञा ही उपपत्ती **पुनःप्रत्याला** अगदी जवळ असणारी आहे. **अभिज्ञा**, म्हणजे ज्ञान अथवा ओळख होय. थोर **भारतीय** विचारवंत : **प्रा.कृ.पा. कुलकर्णी** यांनी मांडली आहे. त्यांच्या मते, ज्ञानाचे **दोन** प्रकार पडतात.

\* **एक** : प्रथम प्राप्त होणारे ज्ञान हे अनुभवाच्या स्वरूपाचे असेल, तर तोच अनुभव पुन्हा एकदा आला की त्यास प्रत्याभिज्ञा म्हणतात.

\* **दूसरे** : म्हणजे, पुर्वी एकदा आपल्याला ज्ञात असलेले ज्ञान ते हेच आहे, असे घ्यानात येणे हे देखील प्रत्याभिज्ञा आहे.

प्रत्याभिज्ञामध्ये केवळ पूर्वीच्या ज्ञात असलेल्या ज्ञानाची स्मृती नाही, तर त्याची **पुनरावृत्ती** समाविष्ट आहे. प्रत्याभिज्ञा आणि पुनःप्रत्य यामध्ये थोडे **साधर्म्य** आहे, असे दिसते. मात्र, त्यामध्ये **फरक** करावयाचा असल्यास, प्रत्ये हा अनुभवाच्या स्वरूपाचा तर, अभिज्ञा हे ज्ञानाच्या स्वरूपाचा असतो, असा करता येतो.

## कॅथार्सिस

कथार्सिस हा सिद्धांत महान विचारवंत आणि व्यासंगी अभ्यासक **ॲरिस्टॉटल** यांनी मांडली आहे. कॅथार्सिस याचा उल्लेख **भावनाविरेचन** असा देखील केला जातो.

अनिष्ट विकारांच्या भावनांना वाट देवून मानवी मन थोडं प्रमाणात **हलके** झाल्याने जे समाधान होते. त्या मागची अवस्था **करूणरसाचीच** असते असे **पाश्चात्य** अभ्यासक **ॲरिस्टॉटल** यांचे मत आहे.

कॅथार्सिस या शब्दाचा मराठीत मूळ अर्थ : **स्वच्छ करणे, व निवडणे** असा होतो. मानवी मनातील दुःखह व शरीर कार्यामध्ये व्यत्यय आणणारा असा एखादा **पदार्थ**, अथवा **रस** असला, तर तो काढून ( स्वच्छ करून) त्याची स्वाभाविक क्रिया परिपूर्ण व्यवस्थित करून देणे म्हणजेच कॅथार्सिस हा सिद्धांत होय.

मानवाच्या पुर्व जीवनामध्ये काही दुःखांत, **भयानक** अथवा **प्रतिकूल**, **अयोग्य** अशा गोष्टी घडलेल्या असतात. याच गोष्टी / भावना आपल्या मनातून स्वच्छ करून टाकण्यासाठी त्या अशायाचा उल्लेख ( त्या भावना, गोष्टींचा उल्लेख ) करून लेखक काव्यनिर्माती करत आणि, त्यांच्या मनातील, भावनांची **तीव्रता** कमी होते, आणि एक समाधानाचा अनुभव येतो. हाच भावनाविरेचन अथवा **ॲरिस्टॉटलचा कॅथार्सिस** होय.



## कॅथार्सिस : विविध अभ्यासकांचा दृष्टिकोन

**लेसिंग :** जर्मन लेखक लेसिंगच्या मते व्यवहारात असे दिसते की, कित्येक वेळी लोकांच्या मनात **भय** आणि **अनुकंपा** या दोन्ही भावना आसतात. किंवा त्या मुळीच नसतात. अगदी क्षुल्लक कारणासाठी रडणारे किंवा प्रिय व्यक्तींचा विरह झाला तरी अश्रू न ढळणारे लोक असतात. अशा लोकांना **शोकांतिका** पहिलायास त्यांच्या या भावना अकारण खर्ची पडत नाहीत. या भावनांना त्यांच्या एकंदर मनोरंजनेत योग्य ते स्थान प्राप्त होत याचाच अर्थ शुद्धीकरण होय.



**रिचर्डस :** रिचर्डस यांनी भावनाविरेचनपेक्षा भावना जागृतीवर आणि त्या भावनामधील समधाततेवर भर दिला आहे.

ॲरिस्टॉटलने उल्लेख केलेल्या भय आणि अनुकंपा या दोन्ही भावनाच रिचर्डस यांनी विचारत घेतल्या आहेत. त्यांच्या मते : " भयामुळे मनुष्य परावृत्त होतो तर अनुकंपेने तो आकृष्ट होतो, म्हणजेच भयामुळे तो दूर जातो व अनुकंपेमुळे तो जवळ येतो. एकीकडे भय आणि दुसरीकडे अनुकंपा यांच्या ओढाताणीत वाचकांच्या मनाची अवस्था समधातत राहते. "

क्रोच : क्रोच यांच्या मते, कॅथार्सिस म्हणजे, " मनुष्य आपल्या मनावर झालेल्या संस्काराचा विस्तार करून आपली स्वतःची सुटका करून घेतो. स्वरूप देतो आणि त्यापद्धतीने सारे मनःसंस्कार त्याच्या दृष्टीने आस्वाद योग्य वस्तू होतात हे कार्य म्हणजे माणसांला आपल्या वैचारिक संस्कारापासून मुक्त होतो यालाच कॅथार्सिस असे म्हटले जाते."

## समारोप

सारांश : पेपर क्रमांक : १२ काव्यशास्त्रमधील काव्यानंदमीमांसा या प्रस्तुत शोधप्रकल्प विविध साहित्य, काव्य, वाचताना, त्याचा आस्वाद घेताना वाजकवर्गाला होणारा आनंद, तसेच विविध काव्य आणि साहित्याची निर्मिती करत असताना कवीला / लेखकाला होणारा आनंद व त्याचे प्रकार आणि अभ्यास स्पष्ट केला आहे.

विविध थोर भारतीय आणि पाश्चात्य विचारवंत तथा अभ्यासकांची विचार, आणि त्यांचे मत व्यक्त केले आहे.

प्रस्तुत प्रकल्पामध्ये आपण - काव्यानंदमीमांसा अर्थ, विषय परिचय, क्रिडानंद, समधातता, जिज्ञासापूर्ती, पुनःप्रत्य, प्रत्याभिज्ञा आणि कॅथार्सिस. - हे काव्यानंदाचे प्रकार अभ्यासली.

Shri Swami Vivekanand Shikshan Samitha's

**Vivekanand College, (Autonomous) Kolhapur**  
**Department of Sociology**  
**PROJECT -2021-2022**

**GROUP-A**

Sr.No	Roll.No	Student Name	Project Title	Sign
1	5615	Vishal Bapurao Dhokave	Study of Nira food factory	
2	5618	PRAJAKTA MADHUKAR QURAV	जी. एच. कोर्से जोरचा जनिविका	
3	5631	मंदार मोहन पाटील	ग्रामीण कुकुनेदा पद्धतीचा अभ्यास	
4	5624	रोहिणी जयपाल नागलेन	महिला वचन राचा अभ्यास	RJ Nagren
5	5621	विजय महेंद्र कांबळे	पाखी समाजाचा अभ्यास	Chavare

**GROUP-B**

Sr.No	Roll.No	Student Name	Project Title	Sign
1	5630	Hemant Baban Nigade	ग्राम पुनर्निर्माण	H. B. Nigade
2	5642	Sumit Ashok Sutar	AAC BLOCK	S. Sutar
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4	5624	Rupali Harbharav Koli	आर्थिक पायाभूत सुविधांचे आर्थिक	R. Koli
5	5628	Muskan Shabbir Mujav	पाखी समाजाचे सामाजिक	M. Mujav

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2	5613	Dipti Haridas Bhorre	ग्रामीण नव्य सुवर्णाचा	D. Bhorre
3	5622	Shilpa Baburao Kauthike	महिला वचने प्रेरणा प्रदान करणारे	S. Kauthike
4	5625	Kotam Arvind Mame	सामाजिक जीवनाचा अभ्यास	K. Mame
5	5627	Adil Aslam Mujav	" "	A. Mujav
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GROUP-D

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2				
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4				
5				

GROUP-D

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2	5636	विठ्ठल हरिदास पवार	शेवती कर्वे - नातेसंबंध अर्थशास्त्र	<u>S.H. P...</u>
3	5637	मागेधा परबारास सुळगेकर	दुखम तळ्या संकलनाचा अर्थशास्त्र	<u>M.P. Sub...</u>
4	5635	पोर्वीमा अमर पाटीले	शिवगंगा राईस मिलचा अर्थशास्त्र	<u>S.H. P...</u>
5	5612	गौरी आशादा वामणे	ग्रामपंचायत रचना कार्याचा अर्थशास्त्र	<u>P. R. Sutar</u>
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1	5614	संजुणा तानाजी श्रीसते	भारत संकतीचा अर्थशास्त्र	<u>P. R. Sutar</u>
2	5641	प्रियाका नारायण कुतार	कोरोनाचा समाजावर मात्सेवा परिणामाचा अर्थशास्त्र	<u>P. R. Sutar</u>
3	5639	पद्मिणी कागवान कुतार	भारतातील आदिवासी समाजाचा अर्थशास्त्र	<u>P. R. Sutar</u>
4	5623	पूजा तानाजी खोत	भारतीय समाजातील विविधतांचा अर्थशास्त्र	<u>P. R. Sutar</u>
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Prof-Chame.H.V

Head Of Department

**HOD**

Department of Sociology  
Vivekanand College  
Kolhapur.




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VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)

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Date : 16<sup>th</sup> June 2022

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4	5471	Jagdale Omkar Vikas	दलितांचे कैवरी : छ. शाहू महाराज
5	5475	Koli Shreyas Pandurang	भोसले मसाले : एक आर्थिक अभ्यास
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8	5436	Bhivdharane Shrinath Navanath	
9	5487	Rajput Priyal Darasing	
10	5465	Bargir Araju Aslam	Poverty Measurement in India
11	5486	Patil Sayali Arjun	
12	5476	Lad Kalyani Shivaji	
13	5470	Jadhav Pratiksha Vilas	Indian Banking System : An Overview
14	5488	Valkunje Sakshi Vilas	
15	5489	Tawade Gayatri Anil	
16	5466	Belvalkar Surabhi Mahesh	Chh. Shahu Maharaj : Education Policy
17	5467	Daive Suraj Mahadev	
18	5469	Halijwale Shravani Vitthal	
19	5472	Kmable Priyanka Rajaram	
20	5473	Kashid Ankita Mahadev	
21	5474	Khandekar Apurva Sarjerao	A Study of Economic Policies in India
22	5478	Misal Akash Suresh	
23	5481	Naikwae Sai Rajendra	
24	5482	Patil Pankaj Pandurang	
25	5483	Patil Rohit Vikas	
26	5484	Patil Rutuja Sadashiv	Study of Human Development Index in India
27	5485	Patil Santosh Bandu	
28	5490	Walvekar Pawan Gajanan	
29	5646	Bhosale Nikita Raghunath	
30	5649	Chavan Dhananjay Gurnath	
			Impacts of GST in India

  
(Dr. Kailas Patil)  
HEAD,

DEPARTMENT OF ECONOMICS  
VIVEKANAND COLLEGE, KOLHAPUR

# **'INDIAN BANKING SYSTEM - AN OVERVIEW'**

*A Research Project Submitted  
to*

**DEPARTMENT OF ECONOMICS,  
VIVEKANAND COLLEGE, KOLHAPUR (Autonomous)**



*For*

**Faculty of Social Science**

*By*

**Kalyani Shivaji Lad**

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**Under the Guidance of**

**Dr. Kailas Patil**

**Asst. Professor,**  
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May, 2022

**DEPARTMENT OF ECONOMICS,  
VIVEKANAND COLLEGE, KOLHAPUR**

**Project Completion Certificate**

This is to certify that **Kalyani Lad and PratikshaJadhav**, B. A. III, of Vivekanand College, Kolhapur (Autonomous) has successfully completed research project entitled "**Indian Banking System – an overview**" for the academic year 2021-22.

Date:- 8 जून 2022

  
Dr. Kailas Patil

Head, Department of Economics

Signature

  
Dr. Kailas Patil

Research Guide .



## DECLARATION

We hereby declare that the research project entitled "**Indian Banking System-an overview**" being submitted herewith under the Faculty of Social Sciences of Department of Economics, Vivekanand College, Kolhapur (Autonomous) completed and written by me/we has not formed earlier the basis for the award of any degree or similar title of this or any other university or examining body.

Place : Kolhapur

Date : 8 June 2022

**Name of the student**

**Signature**

Kalyani Lad(Roll No. 5476)

Pratiksha Jadhav (Roll No. 5476)



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	Certificate
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- **INTRODUCTION**

The banking sector is the lifeline of any modern economy. It is one of the important financial pillars of the financial sector, which plays a vital role in the functioning of an economy. It is very important for economic development of a country that its financing requirements of trade, industry and agriculture are met with higher degree of commitment and responsibility. Thus, the development of a country is integrally linked with the development of banking.

In a modern economy, banks are to be considered not as dealers in money but as the leaders of development. They play an important role in the mobilization of deposits and disbursement of credit to various sectors of the economy. The banking system reflects the economic health of the country. The strength of an economy depends on the strength and efficiency of the financial system, which in turn depends on a sound and solvent banking system. A sound banking system efficiently mobilized savings in productive sectors and a solvent banking system ensures that the bank is capable of meeting its obligation to the depositors.

- **OBJECTIVES**

1. To know the history and structure of Indian banks
2. To study the structure of banking system
3. To evaluate the impact of Nationalisation on banking system
4. To evaluate the banks critically



- HISTORY OF INDIAN BANKS

- Pre Independence Period (1786-1947)

The first bank of India was the "Bank of Hindustan", established in 1770 and located in the then Indian capital, Calcutta. However, this bank failed to work and ceased operations in 1832.

During the Pre Independence period over 600 banks had been registered in the country, but only a few managed to survive.

Following the path of Bank of Hindustan, various other banks were established in India. They were:

The General Bank of India (1786-1791)

Oudh Commercial Bank (1881-1958)

Bank of Bengal (1809)

Bank of Bombay (1840)

Bank of Madras (1843)

During the British rule in India, The East India Company had established three banks: Bank of Bengal, Bank of Bombay and Bank of Madras and called them the Presidential Banks. These three banks were later merged into one single bank in 1921, which was called the "Imperial Bank of India."

- The Imperial Bank of India was later nationalised in 1955 and was named The State Bank of India, which is currently the largest Public sector Bank.
- Given below is a list of other banks which were established during the Pre-Independence period

- **Structure of the Indian Banking System**

Reserve Bank of India is the central bank of the country and regulates the banking system of India. The structure of the banking system of India can be broadly divided into scheduled banks, non-scheduled banks and development banks.

Banks that are included in the second schedule of the Reserve Bank of India Act, 1934 are considered to be scheduled banks.

All scheduled banks enjoy the following facilities:

Such a bank becomes eligible for debts/loans on bank rate from the RBI

Such a bank automatically acquires the membership of a clearing house.

All banks which are not included in the second section of the Reserve Bank of India Act, 1934 are Non-scheduled Banks. They are not eligible to borrow from the RBI for normal banking purposes except for emergencies.

Scheduled banks are further divided into commercial and cooperative banks.

Scheduled, Non-Scheduled Banks and Development Banks

- **Commercial Banks**

The institutions that accept deposits from the general public and advance loans with the purpose of earning profits are known as Commercial Banks. Commercial banks can be broadly divided into public sector, private sector, foreign banks and RRBs.

- In Public Sector Banks the majority stake is held by the government. After the recent amalgamation of smaller banks with larger banks, there are 12 public sector banks in India as of now. An example of Public Sector Bank is State Bank of India.

- Private Sector Banks are banks where the major stakes in the equity are owned by private stakeholders or business houses. A few major private sector banks in India are HDFC Bank, Kotak Mahindra Bank, ICICI Bank etc.

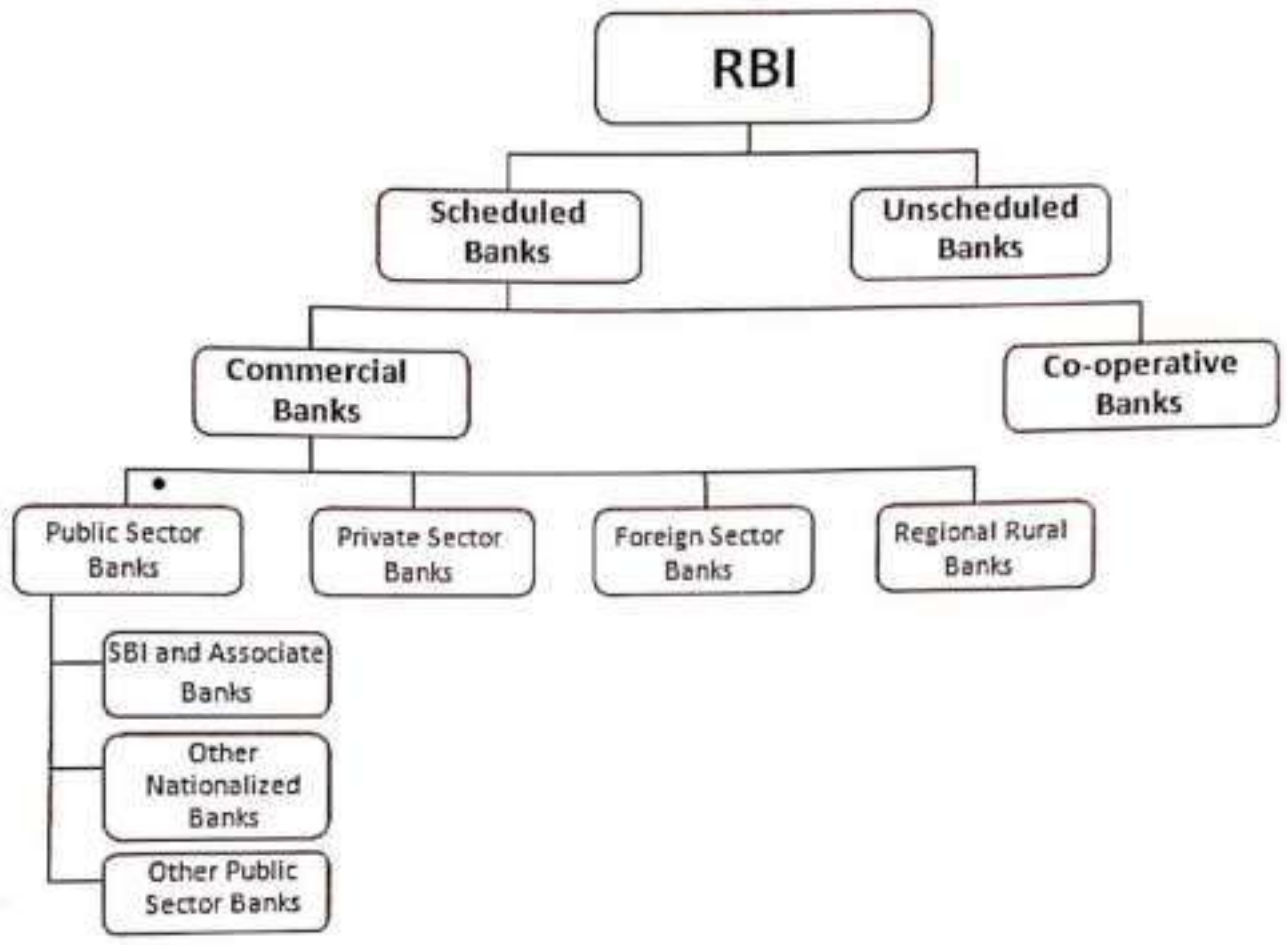


- A Foreign Bank is a bank that has its headquarters outside the country but runs its offices as a private entity at any other location outside the country. Such banks are under an obligation to operate under the regulations provided by the central bank of the country as well as the rule prescribed by the parent organization located outside India. An example of Foreign Bank in India is Citi Bank.
- Regional Rural Banks were established under the Regional Rural Banks Ordinance, 1975 with the aim of ensuring sufficient institutional credit for agriculture and other rural sectors. The area of operation of RRBs is limited to the area notified by the Government. RRBs are owned jointly by the Government of India, the State Government and Sponsor Banks. An example of RRB in India is Arunachal Pradesh Rural Bank.
- Cooperative Banks

A Cooperative Bank is a financial entity that belongs to its members, who are also the owners as well as the customers of their bank. They provide their members with numerous banking and financial services. Cooperative banks are the primary supporters of agricultural activities, some small-scale industries and self-employed workers. An example of a Cooperative Bank in India is Mehsana Urban Co-operative Bank.

- Development Banks

Financial institutions that provide long-term credit in order to support capital-intensive investments spread over a long period and yielding low rates of return with considerable social benefits are known as Development Banks. The major development banks in India are; Industrial Finance Corporation of India (IFCI Ltd), 1948, Industrial Development Bank of India' (IDBI) 1964, Export-Import Banks of India (EXIM) 1982, Small Industries Development Bank Of India (SIDBI) 1989, National Bank for Agriculture and Rural Development (NABARD) 1982





## IMPORTANCE OF BANKS

### 1. Bring Economic Stability

Banking sector plays a crucial role in attaining the economic stability. They are the one who assists in controlling the depression and inflation phases. During depression, banks adopt cheap money policy and increase the flow of money in economy. Whereas at the time of inflation, it follows strict money policy to decrease the flow of money. It increases the interest rate on borrowings to control the people's spending during inflation.

### 2. Creates Money

Banks generates money in an economy by advancing loans to all those who are in need of funds. It is one which grants credit out of the money collected by it from public. These institutions aim at maintaining sufficient flow of funds.

### 3. Facilitates Trade

It helps in doing both internal and external trade. Banks enable merchants in conducting trade by provide them proper payment facility, issuing letter of credit, discounting bill of exchange and providing them other guarantee documents.

### 4. Money Transfer

It enables people to transfer their funds rapidly even to far distant places. It has facilitated the payment system by providing various instruments such as draft, cheque and bill of exchange. Payment done via these instruments is more safe and convenient instead of paying in cash.

# Banking



Personal  
Loan



Vehicle  
Loan



Home  
Loan



Business  
Loan



Gold  
Loan



Savings /  
Current  
Account



Fixed  
Deposit



Internet /  
Mobile Banking



Customer  
Care



Credit /  
Debit Cards

# Banking



Personal  
Loan



Vehicle  
Loan



Home  
Loan



Business  
Loan



Gold  
Loan



Savings /  
Current  
Account



Fixed  
Deposit



Internet /  
Mobile Banking



Customer  
Care



Credit /  
Debit Cards

## NATIONALISATION OF BANKS

years ago, the Indian financial sector underwent a tectonic shift, when Indira Gandhi government nationalized the 14 biggest commercial banks in 1969. According to many economists nationalization of banks was the single-most-important economic policy decision taken by any government after 1947. The impact of this decision is considered by some to be, even more than the economic reforms of 1991.

During that time many Asian countries were switching to more market-oriented policies, India on the other hand, supported the socialist policies.

However, with the looming banking crisis in current times, debates have emerged about the privatisation of banks. This raises the question of whether nationalisation of the bank in the first place was the right move or not.

In 1955, India nationalized Imperial Bank of India with extensive banking facilities on a large scale, especially in rural and semi-urban areas.

It formed State Bank of India to act as the principal agent of RBI and to handle banking transactions of the Union and State governments all over the country





On 19th July 1969, a major process of nationalization was carried out and 14 major commercial banks in India were nationalized.

The second phase of nationalization Indian Banking Sector Reform was carried out in 1980 with six more banks.

This step brought 80% of the banking segment in India under Government ownership.

**What factors led to the nationalization of banks?**

After independence, the Government of India (GOI) adopted planned economic development for the country. Nationalisation was in accordance with the national policy of adopting the socialistic pattern of society.

Nationalization came at the end of a troubled decade. India has suffered many economic as well as political shocks.

There were two wars (with China in 1962 and Pakistan in 1965) that put immense pressure on public finances.

Two successive years of drought had not only led to food shortages but also compromised national security because of the dependence on American food shipments (PL 480 program).

Subsequently, a three-year plan holiday affected aggregate demand as public

## Nationalization

## Of Banks In India



investment was reduced.

The decade of 1960-70s was the lost decade for India as the economic growth barely outpaced population growth and average incomes stagnated.

Industry's share in credit disbursed by commercial banks almost doubled between 1951 and 1968, from 34% to 68% whereas agriculture received less than 2% of total credit.

Agriculture needed a capital infusion, with the initiation of the Green Revolution in India that aimed to make the country self-sufficient in food security.

Other reasons responsible for the nationalization of banks were-

1. Social welfare
2. Controlling private monopolies
3. Expansion of banking to rural areas
4. Reducing regional imbalance to curb the urban-rural divide
5. Priority Sector Lending: In India, the agriculture sector and its allied activities were the largest contributors to the national income.
6. Mobilization of savings: Nationalisation aimed at mobilizing the savings of the people to the largest possible extent and to utilize them for productive purposes.

## What were the benefits of nationalization?

After the nationalization of banks, the branches of the public sector bank India rose to approximately 800% in deposits and advances took a huge jump by 11,000%.

Banking under government ownership gave the public implicit faith and immense confidence about the sustainability of the banks.

Banks were no longer confined to only metropolitan or cosmopolitan in India. In fact, the Indian banking system has reached even to the remote corners of the country.

This is one of the main reasons for India's growth process, particularly in the Green revolution.

Purpose of nationalization is to promote rapid growth in agriculture, small industries and export, to encourage new entrepreneurs and to develop all backward areas.

Public deposits in the bank have increased so much that leaving it completely to the private sector might pose a challenge.

Banks, by advancing loans to the speculators and non-priority sector, have created havoc in the economy.

Balance of payment crisis 1991 started an era of liberalization, privatization and globalisation. However, the political control of bank lending continued even after the 1991 reforms which today had culminated into the bad loan or Non Performing Assets crisis that has slowed down India's growth trajectory.



## ISSUES WITH INDIAN BANKS

Key observations and recommendations of the standing Committee include:

1. **NPAs of public sector banks:** The Committee noted that the problem of high loan write-offs and NPAs, combined with low asset growth, is more severe for public sector banks (PSBs) than private banks. However, it stated that once most of the larger NPAs get resolved as per the Insolvency and Bankruptcy Code or other mechanisms, the situation will become better for PSBs. In this regard, the Committee observed that the present crisis is transient and should not warrant privatisation of public sector banks. The Committee expressed concern about limited improvements in the short-term earnings of PSBs as a result of NPAs. To help in pre-empting frauds by structured sharing of credit information and follow-up action among banks, it recommended the formulation of a law to set up a Public Credit Registry.

2. **Lowering of Capital to Risk-weighted Assets Ratio (CRAR) requirement:**

The Committee noted that RBI's requirement of a minimum CRAR of 9%, to prevent banks from becoming highly leveraged, is 1% higher than the Basel III norms for internationally active banks. This is applicable to all PSBs, even though nine of them do not operate internationally. The Committee observed that such a high CRAR requirement is impractical for these banks, and a relaxation would (i) release capital of approximately Rs 5.34 lakh crore, (ii) grow loans and generate an additional Rs 50,000 crore of income annually, and (iii) avoid the need for capital infusion in these banks.

3. **Banks under Prompt Corrective Action (PCA):**

The Committee observed that 11 PSBs have been placed under the PCA framework by the RBI based on factors such as capital inadequacy and high NPAs. These banks have restricted lending and deposit-taking capabilities as a result. Despite the imposition of PCA, recoveries in these banks have either been stagnant, or grown marginally. The Committee recommended that the RBI should provide a roadmap to these banks to enable them to come out of PCA and resume normal operations.

## Conclusion

As discussed earlier that the liberalization in the policies have led to more private banks coming to effect, the public banks and their dominance have shifted. Earlier their share was up to 8% which now has come down to 66%. But with the emergence of Nationalization, the monopoly has come to an end. There has also been a reduction in the regional imbalance by setting up banks in the rural areas or so. The surplus profit can also be utilized been protection of public interest. The working conditions have also improved and hence, the overall experience of the Nationalization has been quite beneficial for India and its economy.

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**Vivekanand College, Kolhapur (Autonomous)**  
**Department of Geography**  
**B.A. Part III,**  
**2021-22**  
**Project**  
**'Panhala Fort : A Study Of Tourism Geography'**  
**Student List**

Batch -I  
Day & Date \_\_\_\_\_  
Time: \_\_\_\_\_

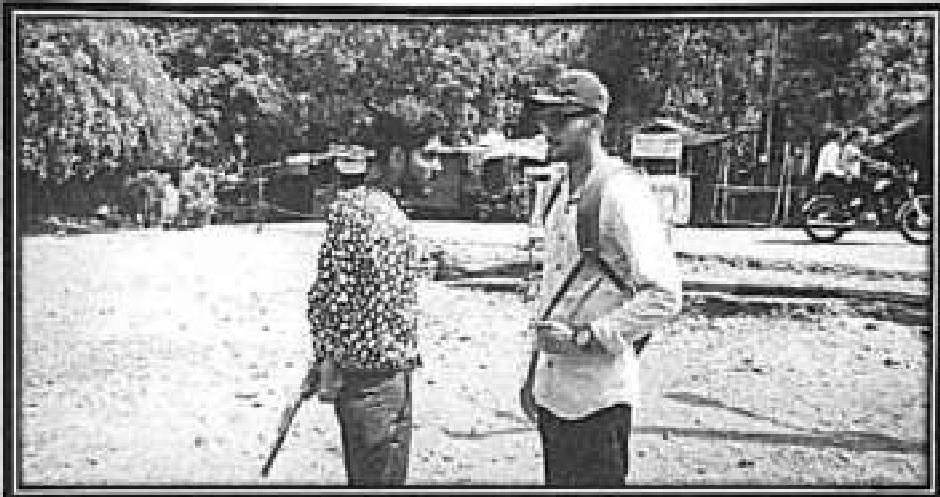
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8	5499	JADHAV SUNNY ARVIND
9	5500	JOSHI AARYA NITIN
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13	5506	KHUDE SHIVDATT MAHADEV
14	5507	KUSALE ABHISHEK SUDHIRKUMAR
15	5508	MAGDUM RAJKANYA JALINDAR
16	5509	MALI RUPALI DATTATRAY
17	5510	MANE ROHIT NANDAKUMAR



18	5511	MORE AVANTIKA SANJAY
19	5512	MORE DHANANJAY BALASAHEB
20	5513	NAIK DHANASHRI MANOHAR
21	5514	PATIL ARPITA BABASO
22	5515	PAWAR AKSHAY NEELESH
23	5516	PAWAR SOURABH SANJAY
24	5517	PAWAR SUMIT SANJAY
25	5518	RAJPUT SUMIT SURATSING
26	5519	SANAP VAISHNAVI DATTATRAY
27	5520	SAVANT JIVAN MAHADEV
28	5521	SHINDE ANUJA ASHOK
29	5522	SHINDE TUSHAR NAMDEV
30	5524	TONAPE MANGESH MARUTI
31	5525	ULAPE SHUBHAM KASHINATH
32	5526	VADAR AMOL DILIP
33	5527	WAGHMARE ROHAN RAMCHANDRA
34	5528	WAKADE SUHAS KESHAV
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36	5060	GANPATI KRUSHNAT GURAV



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Project

Department Of Geography 2021-22

**VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)**

**2021-2022**

**Department of Geography**

**Research Project**

Panhala fort ; A Study of Tourism Geography

Report

**1. Name of the Department** - Department of Geography

**2. Activity** - Panhala fort ; A Study of Tourism Geography

**3. Aims and Objective**

1. Develop capacity for conceptualizing and writing research proposal
2. Enhance skill to proper an appropriate research design
3. provide overview of contemporary research methodology
4. To help participants to choose the right methodology for their research
5. To provide the platform for discussion on the methodological requirements of research
6. To Develop capacity for teaching and learning

**4. No. of beneficiaries :**

Total 36 participants from whole country, professors and college students were present for this program online and offline

Male	Female
24	12

**5. Outcome**

- It helped Research scholar improve their knowledge about the research
- Research scholar became more interested in research career.
- Research scholar get a bright outlook towards problem solving perspective of the society.



Dr. G. S. Ubale  
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Vivekanand College, Kolhapur (Autonomous)  
Department of Political Science  
Project Titles for Paper No. XIV (Indian Foreign Policy DSE-1019F3)

Project Guide: S. A. Farakate  
Allocation Date: 23.04.2022

Sr. No.	Name of the Student	Project Title
1	BENADE KRANTI ANIL	Impact of International Trade on poverty in India
2	CHAVAN SWATI AJIT	
3	Priyanka Suryavanshi	
4	KALE SAKSHI PRAFULLA	
5		
1	JAGDALE ANJALI SANJAY	The Current Government's policy toward Pakistan
2	KAMBLE YASHPAL RAJAN	
3	MORE ROHAN SANJAY	
4	NAIK RAHUL NARAYANRAO	
5	Sanjeevani Bhore	
1	CHAVAN GANESH MAHADEV	World Trade Organization and India's Stand
2	CHAVAN PUSHPAK SANJAY	
3		
4	KATTE LAKHAN KASHINATH	
5	SUTAR SANKET KRUSHNAT	
1	CHOUGULE PRATIKSHA RAVSAHEB	Neoliberal Reforms in India
2	GOTE HARDIK SANDESH	
3	KAMBLE NAVIN SARDAR	
4	KUMBHAR SNEHAL SHRIKANT	
5	JAMBHALE ROHIT DATTATRAY	
1	DABHOLKAR PRATIK VIJAY	India's New Economic Policy
2	PAWAR POOJA ARJUN	
3	POWAR AKANKASHA KRUSHNAT	
4	SALOKHE SHUBHAM BHARAT	



Vivekanand College, Kolhapur (Autonomous)  
 Department of Political Science  
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 Project Guide: S. A. Farakate  
 Allocation Date: 23.04.2022

5	SUTAR SUMIT ASHOK	
1	MANE KARTIKA ANIL	Challenges in India's Relations with the USA
2	KHONDRE GANESH AJIT	
3	LADE RAJ GHANSHYAM	
4	MALI ONKAR ASHOK	
5	POWAR SNEHAL BHIVAJI	
1	SURYAWANSHI PRIYANKA SHIVAJI	India's Approach toward the Rise of China
2	POWAR SAISHWARI MADHUKAR	
3	SANGAR SARVESH SUBHASH	
4	SATARDEKAR ADITYA SAJJAN	
5		
1	PATOLE RUTUJA BABURAO	Free Trade Negotiations between India and the East Asia
2	MHOLE SAYOJITA PRAKASH	
3	SAKATE ANIKET SHANKAR	
4	POWAR PRATHAMESH SANJAY	
5	JADHAV SHARVARI SHASHIKANT	

  
 Samiksha Farakate

Head,  
 Dept. of Political Science



"Education for Knowledge, Science, and Culture"

- Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

**Vivekanand College, Kolhapur**  
**(Autonomous)**



**B.Voc. Animation and Filmmaking**  
**Final Year Projects**

Sr. No.	Name of the Student	Title of Project
1	DEO ATHARVA SUDHANSHU	3D MODEL: Small Assets
2	DUDHGAONKAR SWAPNIL SUBHASH	3D MODEL: Human Face, Car and Furniture
3	KACHARE OMKAR KIRAN	3D MODEL: Small Assets
4	KAMALAKAR VAISHNAV SUSHIL	3D MODEL:- Ship, Car, Elephant and Space ship
5	KAMBLE MADAN MUKUND	3D MODEL: Axe and Cafe
6	KATVE JAY MANIK	3D MODEL: Car, T-shirt and other small assets
7	KHOPADKAR MEGHA SHANTARAM	3D MODEL: knife and knife stand
8	KORE NIKHIL VASANT	3D MODEL: small Assets and furniture
9	PATIL VISHVJIT VILASRAO	3D MODEL: Bag and other Assets
10	SHAIKH AMAN USMAN	3D MODEL: Trophy, Pen Holder and other assets
11	POWAR SAMARTH MURLIDHAR	Short Video
12	SHINDE SHIVPRASAD SHRIRANG	3D MODEL: Small Assets
13	MISAL SHIVRAJ SIDDHU	3D MODEL: Small Assets
14	JADHAV SANKET SARDAR	3D MODEL: Small Assets
15	CHILE PRASAD BHAGWAN	3D MODEL: Small Assets
16	CHANDANSHIVE MONISH SASHIKANT	3D MODEL: Small Assets
17	GAVALI SHUBHAM SANJAY	3D MODEL: Small Assets

Mr. *for N.B. Shinge*  
Mali

Head,

Dept. of Animation and Filmmaking

**VIVEKANAND COLLEGE KOLHAPUR (AUTONOMOUS)**

PROJECT REPORT RECORD SUB: ENVIRONMENTAL STUDIES

B A Part II 2021 – 2022

SR.NO.	NAME OF THE STUDENT	ROLL NO	PROJECT REPORT TITLE
1	POWAR PRATIKSHA M	5134	हवा प्रदूषण
2	GAVASE AISHWARYA M	4989	
3	SURYAVANSHI SHIVANI M	5168	
4	KOLEKAR PRAGATI KISAN	5050	
5	KOTHAVALLE PALLAVI PRAKASH	5054	
6	GHATE VAISHNAVI AJIT	4994	प्लास्टिक कचरा व्यवस्थापन
7	INDIKAR KARINA MALAPPA	5008	
8	REPE POOJA YALGONDA	5148	
9	MOHITE PRERANA PRAVIN	5089	
10	KAMBLE PRAPTI SHAMUWEL	5034	
11	POWAR PRACHI MARUTI	5133	नैसर्गिक आपत्ती - महापूर
12	MAHALE VAISHNAVI SUNIL	5074	
13	PATIL SANIKA SANJAY	5123	
14	PATIL ANUJA MAHADEV	5108	
15	MANE MANISH SUDHAKAR	5081	मानवनिर्मित आपत्ती व नैसर्गिक आपत्ती
16	SUTAR SAKSHI SUKHADEV	5169	
17	KAMBLE GITESHKUMAR ATUL	5030	
18	BANKAR VAIBHAV ARVIND	4959	
19	BHOSALE SANIKA SUBHASH	5187	
20	JAGTAP DHANSHREE SUNIL	5015	पाण्याचे स्थानिक स्रोत, प्रदुषणाची कारणे आणि उपाय
21	KHOT SIDDHESH SUNIL	5044	
22	KADAM PRATHMESH ANANDA	5022	
23	MANE SAMRUDDHI RAMESH	5084	समुद्रातील प्रदुषण
25	HEGADE DIVYA DATTATRY	5005	
26	JAMADAR ANJUM JAVED	5017	
27	BHILARI SARTHAK R	4961	
28	KAMBLE RAMDAS KRISHNAT	5035	
29	CHOUDHARI SHAIJAL M	4979	वाढते शहरीकरण व त्याचा पर्यावरणावरील परिणाम
30	ADSUL VAIJAYANTI VILAS	4951	
31	KAMBLE PRADNYA P	5033	
32	POWAR RASIKA SUBHASH	5136	मानव - वन्यजीव संघर्ष
33	LOHAR NIKITA SUNIL	5069	
34	KUMBHAR SWATI RANGRAO	5060	
35	BAGADI ASHWINI RAMDAS	4954	पर्यावरण प्रदुषण : एक सामाजिक समस्या
36	BAGADI SAISHWAR RAJU	4955	
37	CHOUDHARI TEJASWINI S	4980	
38	KURANE ANKITA DATTATRAY	5182	
39	MANE SHITAL RAJENDRA	5096	जैवविविधता - ऱ्हास, कारणे, परिणाम
40	JAMADAR BASERA RASUL	5018	
41	GHATAGE OM PRASHANT	4992	

42	GOSAVI SUSHANT ANKUSH	4999	पर्यटन स्थळे
43	SALGAR VIKAS MARUTI	5150	भूमि प्रदूषण
44	PATIL NIKHIL BHUJGONDA	5116	
45	JAGTAP DIPAK JAYSING	5016	
46	MUJAWAR SADALI G	5092	
47	KOLI SUMIT SARJERAO	5053	
48	PARKAR MANSI EKNATH	5105	Microplastic in fresh water & drinking water
49	PATIL KOMAL NAMDEV	5114	
50	PATIL SAMIKSHA ANNAKUBER	5121	
51	DALAVI SNEHAL NAMDEV	4985	
52	LAD KISHORI KRUSHNAT	5062	
53	MANE SHITAL RAJENDRA	5086	महाराष्ट्रातील नैसर्गिक आपत्ती
54	NARSINGE SANIKA BHARAT	5099	
55	PATIL VAISHNAVI PRABHAKAR	5126	
56	JATHAR SANKET SHAHAJI	5019	
57	CHAUGULE SUNIL VIJAY	5186	
58	JADHAV AKANKSHA SARADAR	5011	प्लास्टिक प्रदूषणाचा अभ्यास
59	GURAV PALLAVI UDAY	5181	
60	SALOKHE ROHAN RAJARAM	5151	
61	HARSHE AVADHUT KIRAN	5003	
62	SANADI AMISHA TUKARAM	5153	मानवनिर्मित आपत्ती व नैसर्गिक आपत्ती
63	POWAR SNEHAL PRAKASH	5138	
64	HULASWAR AVDHOT P	5007	
65	KAMBLE ADITYA KRISHNAT	5026	
66	PATIL VAISHNAVI VAISHNU	5127	
67	GURAV VAISHNAVI SANJAY	5002	नैसर्गिक आपत्ती
68	GURAV SNEHAL SAGAR	5001	
69	MANE HARSHAD BABASO	5080	
70	LOKHANDE SHIVANI PRAKASH	5073	
71	GAWANDE RUCHA SANDESH	4990	वाढते शहरीकरण व त्याचा पर्यावरणावरील परिणाम
72	PATOLE VAIBHAVI SANJAY	5128	
73	MANE SAYALI SAMBHAJI	5085	
74	DOLARE AAKANKSHA H	4987	
75	KUBER AVANTIKA MADHAV	5055	
76	KUMBHAR ABHIJIT KRUSHNAT	5059	ध्वनी प्रदूषण अभ्यास- कारणे, परिणाम, उपाय
77	NARAKE TEJAS DATTATRAY	5098	
78	PATIL OMKAR MAHADEV	5117	
79	CHAVARE ABHIJEET SAVLA	4978	
80	SHINDE MAYURESH K	5162	
85	ARADE PALLAVI DAGADU	4953	ई - कचरा व्यवस्थापन
86	SAINI GUNJAN SANTOSH	5149	
87	BODAKE VAISHNAVI SURESH	4967	
88	NANGARE DHANASHREE K	5097	



89	SARNOBAT PRIYADARSHANI S	5155	वाढत्या वायू प्रदुषणाचा अभ्यास
90	NAKIL SANIKA VIJAY	5095	
91	KUDCHIKAR JUVERIYA ASIF	5057	
92	KODGULE AISHWARYA S	5046	
93	POWAR RADHIKA SANDEEP	5135	
94	BUVA SANJANA SHAM RAO	5177	कोल्हापूर शहरातील वायुप्रदूषण
95	BANDAL SNIGDHA AMAR	4958	
96	PATIL NAYAN JAYSING	5115	
97	PURIGOSAVI VAISHNAVI R	5140	
98	JOSHI VISHNU OM PRAKASH	5020	टाकाऊ कचऱ्याचे वर्गीकरण व व्यवस्थापन
100	MANE AMIT LAKAPPA	5079	
101	BAGANE AISHWARYA SURESH	4956	
102	KOKARE PRIYANKA ARVIND	5047	
103	WALI SAURABH SURESH	5172	
104	KHOT KOMAL BALASO	5043	कोल्हापूर शहरातील जलप्रदूषणाचा अभ्यास
105	SWAMI APURVA GAJANAN	5170	
106	PATIL PRADNYA RAMESH	5176	
107	GEJAGE DADASO ARJUN	4991	
108	CHOUGULE VIVEK VILAS	4983	
109	MALI ARTI RAJENDRA	5075	जैवविविधता
110	MOLE AISHWARYA RAJESH	5091	
111	HASURE SNEHAL BHAUSO	5004	
112	NAIKNAWARE SHITAL H	5094	
113	BHALDAR SABIYA FIROJ	4960	प्लास्टिक समस्या
114	MANE SIDDHI SUNIL	5087	
115	INGAVALE YASH ASHOK	5009	
116	SHINDE RAVINDRA SANJAY	5163	
117	PATIL VAIBHAVI C	5124	
118	KAMBLE SANIKA KUNDAN	5040	औषधी वनस्पती
119	KAMBLE RANI SAMPAT	5036	
120	SHINDE SRUSHTI LAXMAN	5165	
121	PATIL SANIKA ANANDA	5122	टाकाऊ कचऱ्याचे व्यवस्थापन
122	CHAVAN SAMRUDHIN	4975	
123	PATIL VAISHALI SAHADEV	5125	
124	RATHOD ARUN BABU	5142	
125	CHAUGALE SATYJEET PRAKASH	4971	
126	PARIT RASIKA VISHNU	5103	जैवविविधता अभ्यास
127	LOHAR ISHA VITTHAL	5068	
128	JADHAV DHANASHRI SURESH	5012	
129	POWAR TEJASWEE SURESH	5139	
130	RATHOD ASHOK BABU	5143	वाढते शहरीकरण
131	KALOKHE PRANIL ANIL	5025	
132	CHAVAN VIJAY RAMESH	4977	
133	POWAR SHUBHAM RAJU	5137	

134	YADAV VAIBHAV KRUSHNAT	5174	
135	SHINDE SHIVSHANKAR N	5164	वाढते शहरीकरण
136	KOLI MOHAN RATNAKAR	5051	महापूर
137	JAGTAP ASHA NIWRUTTI	5014	परिसरातील वनस्पती
138	KUMAR ASHISH .	5058	Hydel energy
139	LAD NAMRATA KISHOR	5063	मानव - वन्यजीव संघर्ष
140	SHAIKH JUVERIYA JAVED	5157	
141	NAVALEKAR AIMAN TAJUDDIN	5100	
142	CHAVAN PRATIKSHA A	4973	
143	PATEL TABASSUM RAFIK	5106	
144	PATIL DARSHAN BHARAT	5109	
145	PATVEGAR SHOAB S	5129	
146	REDEKAR SANDESH S	5147	
147	SHAIKH SAHIL RIYAJ	5159	
148	KAMBLE HARSHAD AAKARAM	5031	
149	KAMBLE ANIKET ASHOK	5028	जलसंवर्धन काळाची गरज
150	BHOSALE PRAJWAL KIRAN	4965	
151	KAMBLE ANIKET ASHOK	5027	
152	KALE TUSHAR TUKARAM	5024	
153	GHORAPADE VIKRAM N	4996	
154	PINGALE ANIKET GURUDAS	5130	घनकचरा व्यवस्थापन
155	BHOSALE CHANDRAKANT D	4963	
156	RANE TEJAS PANDIT	5141	
157	GONDHALI AVISHKAR R	4998	
158	HIRAVE OMKAR AVABA	5006	
159	PALANGE VISHWAJEET M	5102	जागतिक तापमानवाढ
160	KUNDLE AKSHAY JAGANNATH	5061	
161	CHAVAN PRATIKSHA GAJANAN	4974	
162	KOLI SAKSHI NAMDEV	5052	
163	JADHAV AARYAN RAVINDRA	5010	जागतिक तापमानवाढ
164	PINGALE KADAM BARI MOHAN	5131	कोल्हापूर शहरातील पाणीप्रदूषण
165	MANE RUTUJA GANESH	5083	
166	PATIL KALYANI MANOHAR	5112	
167	MANE PRATIK GANESH	5082	
168	KAMBLE RUSHIKESH R	5037	
169	RATHOD SANGRAM Y	5145	शहरातील झोपडपट्टी आणि तेथील समस्यांचा अभ्यास
170	MALI SAIRAJDILIP	5077	
171	MOHITE SHRIVARDHAN U	5090	
172	WASKARADITYA MANVENDRA	5173	
173	PATIL HEMANT MILIND	5111	
174	LADE YAMINI PRAKASH	5065	जलसंवर्धन काळाची गरज

175	BHIVDARNE AMAN DEVDAS	Environmental Importance of Places of Worship
176	SANADE SRUSHTI SUDARSHAN	
177	GURAV PALLAVI BABURAO	
178	THAKARE DHANASHRI D	
179	PATIL AMRUTA BHAGAVAN	Man versus Wild
180	PATIL SIDDHANT SANJAY	
181	CHAVAN NETAJI BHARAT	
182	KADAM RUTUJA BHARAT	
183	DALVI PRANAV PRADIP	



**Mr. A. S. Kadam**

Head,

Department of Environmental Studies  
Yivekanand College, Kolhapur.

## VIVEKANAND COLLEGE KOLHAPUR (AUTONOMOUS)

PROJECT REPORT RECORD SUB: ENVIRONMENTAL STUDIES

B SC Part II 2021 – 2022

SR.NO.	NAME OF THE STUDENT	ROLL NO	PROJECT REPORT TITLE
1	Harshad Kiran Patil	7438	Study On Man And Wildlife Conflict In Maharashtra
2	Rajkumar Baban Karape	7428	
3	Omkar Jitendra Shinde	7631	
4	Pranav Tanaji Shinde	7451	
5	Onkar Anil More	7604	Study On Urbanization And It's Impact On Environment In Maharashtra
6	Shubham Shashikant kore	7603	
7	Shreyash Ramesh Ingale	7599	
8	Prathmesh VijayKumar chougule	7595	
9	Swarup Krushnat Gadve	7597	
10	Darshan Sharad Kanire	7427	Submitted
11	Kedar Powar	7447	Global Warming
12	Sourabh Vadar	7637	
13	Shubham Kalkutaki	7425	
14	Om Patil	7440	
15	Swapnil Patil	7445	
16	Shivani patil	7403	Importance And Values Of Biodiversity
17	Manisha shinde	7450	
18	Shweta Todakar	7632	
19	Rutuja waghmare	7614	
20	Pratiksha Aavdankar	7365	
21	Shivangi Yadav	7499	Urbanisation And It's Impact On Environment
22	Lovely Sav	7495	
23	Rohini Yadav	7498	
24	Bhagyashree Yadav	7516	
25	Muskan Mourya	7510	
26	Sahil vanarse	7633	Ground Water Footprint Of Kolhapur



27	Samrudhi Borage	7615	
28	Aishwarya Yadav	7635	
29	pankaj Dhavale	7617	
30	Parth Jadhav	7621	
31	siddika Ambardekar	7591	Environmental Pollution
32	shifa pathan	7624	
33	sakshi kamate	7622	
34	Isha Shintre	7612	
35	Bhopale Animesh	7592	
36	Vivek Janardan Shinde	7407	
37	Ankit Vinayak Kadwale	7381	
38	Aditya Dattatray Kamble	7382	
39	Shankar Gajanan Jadhav	7378	
40	Pradnyavant Machhindra Kamble	7384	
41	Pratiksha Rajgonda koli	7481	Study Of Environmental Justice
42	snehal narasu koli	7482	
43	shamal dattatrya ghatage	7374	
44	shreya sardar gurav	7475	
45	vaishnavi nanaso jadhav	7476	
46	Sanika Sokasane	7453	
47	Vaishnavee Thakare	7456	
48	Sanika Ubare	7411	
49	Mahek Jamadar	7380	
50	Mujawar Ummeaiman	7434	
51	Ajay Mohan Suryavanshi	7469	E Waste
52	Suyash Sanjay Dongare	7636	
53	Vinayak Rajaram Teli	7455	
54	Prashant Pandurang Shinde	7496	
55	Shivani S. Patil	7404	Biodiversity In India (Western Ghat)
56	Varsha Panhalkar	7437	
57	Prajakta Patil	7442	

58	Vaibhavi Gade	7416	
59	Vaishnavi V. Jadhav	7421	
60	Hanumant V. Kapase	7479	E Waste Management
61	Naganath U. Sankpal	7494	
62	Omkar S. Sutar	7497	
63	Vinayak D. Devekar	7459	
64	Nikhil S. Patil	7464	
65	Sakshi J. Patil	7347	Traditional & Modern Agriculture
66	Shweta R. Singh	7360	
67	Anuradha A. Zirange	7500	
68	Sapana R. Singh	7468	
69	Shweta B. Patil	7607	
70	Sanjana Sanjay Patil	7443	Water Pollution
71	Nikita Ashok Patil	7439	
72	Shruti Vinay Gutte	7417	
73	Veda Gurunath Potdar	7446	
74	Abhishek Hawale	7598	E-Waste And It's Causes, Effects, Control Measures
75	Dhiraj Jadhav	7620	
76	Aman shaikh	7609	
77	Nikhil kesarkar	7623	
78	Pratik Tehasildar	7613	
79	Chavan Dhanashri	7413	Light Pollution
80	Kumbhar Dhanashri	7392	
81	More Prajakta	7397	
82	Chavan Shruti	7367	
83	Patil Pooja	7441	
84	Aishwarya Deepak Shingade	7514	Oil Spills
85	Priyanka Sanjay Chougale	7565	
86	Pradnya Prashant Jadhav	7506	
87	Saee Sandeep Jadhav	7460	
88	Prerana Pradeep Shirke	7515	

89	Priyanka Suryavanshi	7408	E-Waste - Causes, Effect And Control Measures
90	Nupur Kulkarni	7390	
91	Sakshi Patil	7465	
92	Arpita waydande	7471	
93	Pratiksha Chougale	7415	Man And Wild Life Conflict
94	Vrushali Patil	7629	
95	Anushree Suresh Rathod	7493	Ozone Layer Depletion
96	Sakshi Tushar Bhopale	7502	
97	Amruta Dattatray Patil	7487	
98	Prerana Pradeep Shirke	7515	
99	Khot Rutuja	7388	
100	Tejas G. Chougule	7596	
101	Atharva B.Jasud	7600	
102	Aditya J. Kale	7601	
103	Shoab I. Pendhari	7608	
104	Akash sangar	7448	
105	Ajinkya A. Thorvat	7410	Study Of Various Natural Disasters – Earthquakes
106	Yusuf R. Bargir	7366	
107	Abhishek S. Mali	7393	
108	Dnyaneshwar S. Garad	7373	
109	ketan A. Kamble	7508	
110	Siddhesh Chougule	7507	Study Of Noise Pollution
111	Anirudha Patil	7411	
112	Dhiraj Bhingardev	7501	
113	Aman Maner	7509	
114	Sandeep Patil.	7513	
115	Satyajeet Sanjay Patil	7488	Water Pollution
116	Pruthviraj Pandurang Powar	7491	
117	Aniket Arun jadhav	7422	
118	Sourabh Ramesh jadhav	7379	
119	Pankaj Parasharam jadhav	7419	

120	Aditi Narayan Ingale	7619	Impact Of Plastic On Environment
121	Mithila Santosh patil	7628	
122	Dnyaneshwari Jayveer Patil	7626	
123	Gunjan Sachin Kante	7602	Environmental Pollution
124	Vrushali Umesh Ropalkar	7466	
125	Vedaja Ajay Yadav	7412	
126	Swapnali Nadale	7605	
127	Shivani Tashildar	7409	
128	Manasi jamdade	7423	Waste Management
129	Sanika Shinde	7452	
130	Shardhha patil	7445	
131	Tejswini kumbhar	7431	
132	Aryan Karekar	7386	
133	Ashish Jadhav	7376	Study Of Natural Resources From Kolhapur District
134	Rasika Magdum	7484	Environmental Pollution & Waste Management
135	Rutuja kamble	7478	
136	Snehal pirai	7490	
137	Manoj Jagannath Mane	7433	Solid Waste Management
138	Sahil Ananda Sawant	7406	
139	Prathmesh Suresh Agalave	7517	
140	Shakir Salim Bagwan	7472	
141	Ghorpade Anjali	7505	
142	Rajnandini Gaikwad	7371	Urbanization
143	Namrata Gajare	7372	
144	Ankita Khot	7462	
145	Shivani Todakar	7470	
146	Shreya Jadhav	7420	
147	Aditi mohan patil	7401	E Waste
148	Tejaswini sampatrao mali	7395	
149	Gouri sagar tandale	7454	
150	Anjali Bhagwan Kamble	7426	Marine Pollution



151	Apeksha Bhujgonda Patil	7625	
152	Vidira Rajaram Vibhute	7634	
153	Gayatri Aananda Patil	7627	
154	Komal Prakash Chavan	7616	
155	pranav ambi	7364	Study Of Natural Resources From Kolhapur District
156	pratik karale	7385	
157	Shreyash Dhotre	7370	
158	vinayak gosavi	7375	
159	vinayak disale	7369	
160	Swarupa Uttam Gilbile	7547	Biodiversity
161	Tejas kothawale	7429	Effect Of Fertilizers On Agriculture Land
162	Shreyash Warke	7457	
163	varsha Kumawat	7430	
164	Sejal shinde	7611	
165	Madhura chougale	7594	
166	suraj mulik	7398	Water Pollution & Marine Pollution
167	Nishikant Khatangle	7389	
168	swaroop mane	7396	
169	Abhishek patil	7400	
170	Abhishek kumbhar	7391	
171	Rohit kamble	7477	Effect Of Fertilizers On Agriculture Land
172	Harshwardhan kopardeker	7483	
173	Mustakim momin	7485	
174	Kharose Prathamesh	7480	
175	Kumawat Ritu	7530	
176	Prajakta bote	7593	Water Pollution
177	Shubham durugale	7618	
178	Sidhi pandharpatte	7606	
179	Akanksha shinde	7467	
180	Asmita kondekar	7463	
181	Vaishnavi Adsul	7301	Urbanization

182	Nandini Gije	7318	
183	Shubham Rathod	7353	
184	Tushar shinde	7358	
185	Patil Sachin	7346	
186	Sayma Aga	7585	Biodiversity Conservation
187	Tanjila Mokashi	7576	
188	Vaishnavi Baganikar	7562	
189	Priyanka Koli	7574	
190	Ojaswita Desai	7314	Traditional & Modern Agricultural
191	Vaishnavi Gurav	7320	Practices : Drawbacks & Benefits
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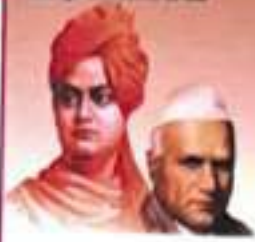
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Shri Swami Vivekanand Shikshan Sanstha's  
**VIVEKANAND COLLEGE, KOLHAPUR [Autonomous]**

(Affiliated to Shri Chhatrapati Shahu Maharaj University, Kolhapur)

NAAC Reaccredited : "A" with CGPA 3.24

College With Potential For Excellence

"Star College" by D. B. T. Govt. of India



Std.: B.Sc Part II

Sub.: Environmental Studies

Project Name : **Effect of Urbanization on Environment**

Submitted to :

**Vivekanand College, Kolhapur (Autonomous)**

Under the Guidance Of

**Mr. A. S. Kadam Sir**

Through the Principal -

Vivekanand College, Kolhapur (Autonomous)

Year 2021-22

Submitted By :

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## Declaration

We the undersigned hereby declare that the project entitled "**Effect of Urbanization on Environment**" is an original work prepared by me under the guidance of **Prof. Mr. A. S. Kadam**, Degree course in Environmental studies to Vivekanand College, Kolhapur(AUTONOMOUS). The findings in this report are based on the data collected by me. The matter included in this report is not a reproduction from any other sources.

In undersigned that any such copying is liable to be punished as the authority deem fit.

Date: 03/06/2022

Place: Kolhapur

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5. Chougale Prathmesh Vijaykumar	7595	<u>[Signature]</u>

## CERTIFICATE BY GUIDE

This is to certify that the project entitled "**Effect of Urbanization on Environment**" submitted by More Onkar Anil, Gadave Swarup Krushnat, Kore Shubham Shashikant, Ingale Shreyash Ramesh, Chougale Prathmesh Vijaykumar in partial fulfillment of the degree leading to **S.Y. B.Sc** degree course in environmental studies to the Vivekanand College, Kolhapur(AUTONOMOUS) has been completed under the guidance and supervision of **Prof. Mr. A. S. Kadam** of Department of Environment, Vivekanand College, Kolhapur (Autonomous).

To the best of our knowledge and belief the work and the matter presented in the project report is original and based on their own work.

Date: 03/06/2022

Place: Kolhapur



**Prof. Mr. A. S. Kadam**

(Project Guide)

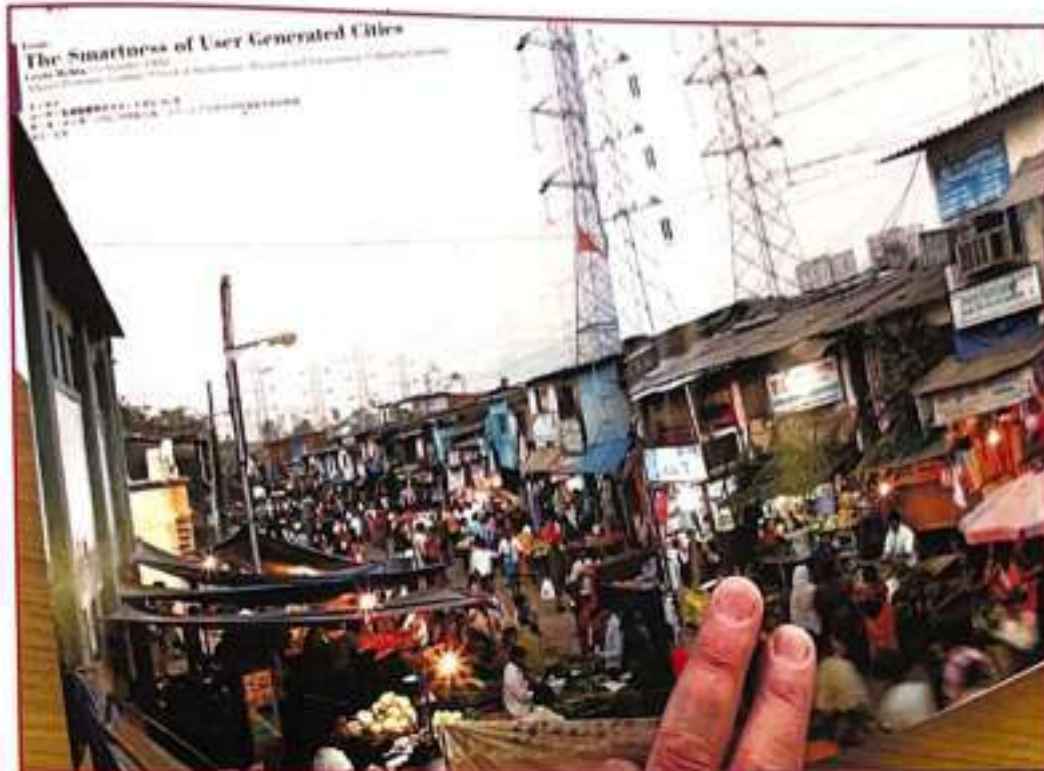
Vivekanand College, Kolhapur( Autonomous)

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## Introduction



### **Definition of environment:**

The sum total of all surrounding of a living organisms, including natural forces and other living thing, which provide conditions for development and growth as well as of danger and damage.



## General Environment



Environmental science is a multidisciplinary academic field that integrates physical and biological sciences (including but not limited to ecology physics, chemistry, zoology, mineralogy, ocean logy, limnology, soil science, geology, atmospheric science and geography) to the study of environment, and the solution environmental problems. Environmental sciences provide an integrated, quantitative, interdisciplinary approach to the study of environmental system.

Related areas of study include environmental studies & environmental engineering. Environmental study in corporate more of the social science for understanding human relationships, perception and policies toward the environment. Environment engineering focuses on deigns and technology for improving environmental quality in every aspect.

Environmental scientists work on subject like the understanding earth process, evaluating alternative energy system, pollution control and mitigation, natural resource management, and the effect of global climate change. Environmental issues almost always include an interaction of physical, chemical, and biological processes.

Environmental scientists bring a system approach to the analysis of environmental problems. Key element of an effective environmental scientist includes the ability to relate space, and time relationships as well as quantitative analysis.

## Basic concept of urbanization -

It is pertinent to identify the main issues which are concerned with the process of urbanization in India and other developing countries as well. These are (1) Economic (2) Demographic (3) Political (4) Social and Cultural. Urbanization is considered to be an inevitable part of economic development.

Urbanization has been viewed as an important factor in the areas of economic transformation, orchestrating the breakdown of the feudal order and taking societies to higher levels of social formation.

Urbanization is intrinsically connected and irrevocably enlaced with the development process, as an essential strand in the contemporary economic system. At the same time some scholars argue that urbanization is not merely the concomitant of economic growth and social change. Urbanization in India has been relatively slow during the last century the period as compared with many other developing countries. In India the definition of "urban" remained more or less same for the period 1901-1951.

However in the 1961 census, several modifications were made and the definition of "town" adopted for the 1961 census was much more rigorous and further, this new definition was followed all over the country uniformly. From 1981 onwards while calculating the proportion of workers in non-agricultural activities, the workers in occupation of fishing, livestock, hunting, planting and orchards have been included in agricultural worker whereas such workers were included in the category of non agricultural worker at the time of 1961 and 1971 censuses.



increase in surface temperature over the last 100 years. Between 1906 and 2006, the Earth's average surface Environment engineering focuses on designs and technology for improving environmental quality in every aspect. Environmental scientists work on subject like the understanding earth process, evaluating alternative energy system, pollution control and mitigation, natural resource management, and the effect of global climate change. Environmental issues almost always include an interaction of physical, chemical, and biological processes. Environmental scientists bring a system approach to the analysis of environmental problems. Key element of an effective environmental scientist includes the ability to relate space, and time relationships as well as quantitative analysis. Millions of pounds of methane gas are generated in landfills and agricultural decomposition of biomass and animal manure.

## Need Of Project

The Project Takes Approach of uncontrolled Urbanization in India, Environmental Degradation has been occurring Very rapidly and causing many problems like Land Insecurity, worsening water quality, excessive air pollution, noise and the problem of waste disposal also it adversely affects on Human day-to-day Life.

## Objectives

- ✓ To study of main component of urban growth.
- ✓ To study issues of good urban governance.
- ✓ To study of future of urbanization in India.
- ✓ To study of impact of urbanization in India.
- ✓ To study of benefits of urbanization in India.



# **CHAPTER 2**

## **RESEARCH**

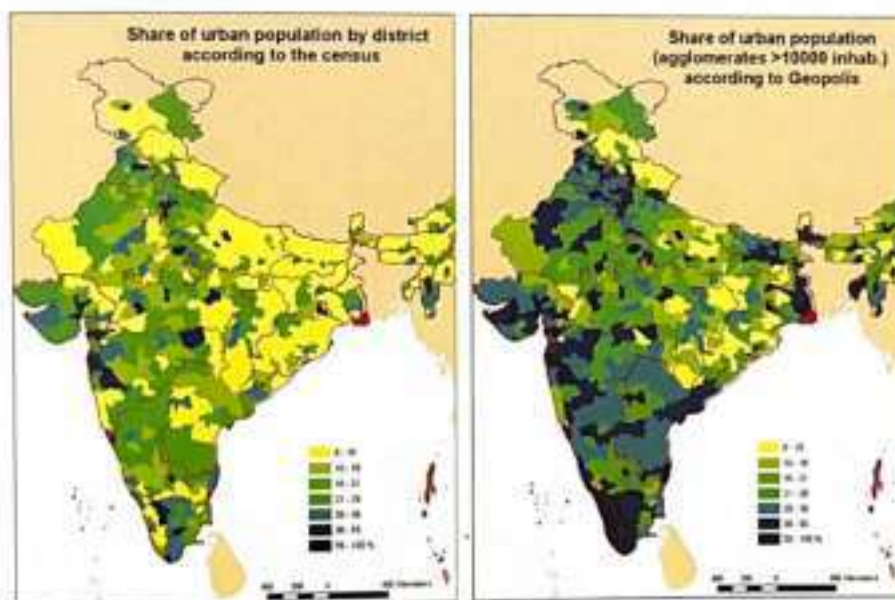
### **METHODOLOGY**

## Study Area

To study the studies on effect of urbanization on Environment in India India's urban Population is the second largest in the world, After China. Component of urban growth 41.7 percent during 1971-81 & 58.7 percent during 1981-91. Net migration and changes in municipal boundaries about 39.4 percent during 1971-81 & it has reduced to 22 percent in 1981-91 in India.

India's overall demographic figures of Rural- urban divide do not reveal the fact that a size. Enable part of the country has reached levels of urbanization that are much than the national average. Among the large states, the states of Tamil Nadu & Maharashtra are very close to the halfway mark & the states. Gujrat & Karnataka are substantially urbanized.

## Area Map



## Method Used ( Secondary Method)

From this method I will study the different websites & news paper to complete my project and I will find out different types of Information also their -problems & soluations to complete my project. I will collect Information & summarized the reason which are response the effect of urbanization on enviroinment

# **CHAPTER 3**

# **REPORTING**



## Reporting

**The four main component of urban growth are:**

1. Natural increase
2. Migration
3. Boundary change
4. Declassification

This analysis of urbanization leaves no doubt that Indian society is in a stage of massive urban transition. India's urban population is the second largest in the world, after china. Both, natural increase and rural to urban migration have contributed towards the urban growth in India. Component of urban growth 41.7 percent during 1971-81 and 58.7 percent during 1981-91. Almost the similar trend has been found by (Pataki & Mehta 1995). It reflects the role of demographic momentum. Net migration and changes in municipal boundaries about 39.4 percent during 1981-81 and it has reduced to 22 percent in 1981-91.

**India's urbanization:**



India's overall demographic figures of rural-urban divide do not reveal the fact that a sizeable part of the country has reached levels of urbanization that are much higher than the national average, among the large states of



Tamil Nadu and Maharashtra are very close to the halfway mark and the states Gujarat and Karnataka are substantially urbanized. The smaller states of Delhi and Mizoram and Goa are wholly or predominantly urban, and so are some of the Union Territories. Even Uttar Pradesh, West Bengal, Andhra Pradesh, Madhya Pradesh, Rajasthan, Bihar, and Punjab that are predominantly rural states have very large urban populations. The graph of metropolitan and mega cities has continued to climb and 35 such cities now dot the India landscape. And scores of cities with populations in excess of 100000 are jostling to join the million-plus city club. These unambiguous facts that stare us in the face clearly demand that the country's urban portfolio is large enough to merit serious concern. India's issues with all their related challenges and opportunities demand their firm place on the national agenda and Nation urbanized states need to lead in strategizing for cities and their needs

### **Future of urbanization :-**

Urbanization is set to stay for a long time. It may slow but surely does not show any signs of stopping. In 1985, 45% of the world population stayed in cities. Scientists estimate that 60% of the world population will be city dweller by 2025. The main goal of urban planning is to make all amenities and comforts available to the public without imposing many negative effects on society and environment, aptly referred to as "sustainable growth". The cardinal rule is to plan cities beforehand, rather than let them grow spontaneously and haphazardly. During city planning it should be ensure that adequate infrastructure is available to support the support the population.

Opportunities can be created within rural areas to reduce stress on cities. This also results in a higher standard of living for the people of the country as a whole. Some of the village in south Canada district of Karnataka set a good. example for this. They have efficient transport and communication system and electricity. Co-operatives have been set up to provide financial aid to peasants. The rural people have been encourage to engage in cottage industries and commercial activities such as making pickles, handicrafts, sweets and savories. Through co operative, an agency, marketing of these goods also has become easy. This is an efficient method of curbing urbanization, by creating opportunities for people in villages.



## Impact of urbanization



### **1. Population Explosion:**

One of the most obvious or noticeable effect of urbanization is population explosion that it brings along with it. What is population explosion? Well the term population explosion basically stands to signify an uncontrollable is cable of bringing about. When a particular area experiences development and urbanization, it automatically becomes an attractive are and this brings in people by the thousands, ultimately exerting undue pressure on precious resources. Apart from resources, this can also result in an inequitable distribution of wealth, where the richer and the poor get poorer.

## **2. Infrastructural woes:**

If you just happen to live in highly urbanized area, you may really not be a stranger to the woes of infrastructure. These woes aren't too uncommon in an urbanized world. On one hand you have transport problems to deal with and on the other, you have sanitation, water and power setback to put with. This make up for quite a wet blanket when it comes to the problems that are a direct result of urbanization. If the governments of the world can find away to get the better of these unfortunate circumstances, then urbanization will really seem like the boon that it is.

## **3. Crime Time:**

An increase in crime makes for yet another unfortunate consequence of uncontrolled and biased urbanization. Why does this happen? This happens because there is wealth or the means to acquire the same, there always are criminals. Crime can range from burglary and vandalism to petty theft and sometimes even murder for gain. Unfortunately, it is not the bureaucrats or the police who face the brunt of these crimes, but the common man who does. It is advisable for highly urbanized areas to get matters of crime under control before the same reach the heights of unbearable tolerance.

## **4. Inequality and Escalating Costs:**

As mentioned before, in an urbanized setting, it is almost always the rich who get richer while the poor get poorer. This only means that while the rich are finding it extremely easy to make ends meet, the poor are fighting it out for a hand to mouth existence. While at one end of the spectrum the rich roll in the lap of luxury, the poor and the not so fortunate bleed for a square meal, which really makes the makes the whole scenario a very miserable one. To add to this misery is the whole issue of escalating costs which at times can even makes the rich thick twice before buying commodities that can be best described as essential.



## Population

Sr.No.	City	1991 Census	2001 Census
1	Gr.Mumbai	9.93	11.91
2	Delhi	7.27	9.82
3	Kolkata	4.40	4.58
4	Banglore	2.66	4.29
5	Chennai	3.84	4.21
6	Ahmadabad	2.88	3.52
7	Hydrabad	2.96	3.45
8	Pune	1.57	2.54
9	Kanpur	1.87	2.53

Between 2001 and 2007 there should have been further influx at a faster pace of rural population in cities. While urbanization is an inevitable sequel to social and economic development, it is not without its adverse consequences. This fast paced urban population growth on the scales seen from the accompanying table has caused great strain on the capacity of urban or municipal corporations to provide even the basic utilities like housing, water, electricity and sewerage. This is bound to aggravate to unbearable levels. Unauthorized slums spring up in every available space with no municipal facilities whatsoever. Such an unplanned squatter settlements is a clear index to the unbearable living conditions in the villages than to any planned urban development. These immigrants are prepared to put up with much hardship in the cities than face hunger in villages. What does this transformation to the cities than face hunger in the villages. What does this transformation to the complexion of cities indicate? Is it development of cities or degeneration of the rural areas? It is felt that as cities expand without matching infrastructure and job opportunities, the poverty of the rural side just gets urbanized.

### **Rural urban transformation:**

It is an interesting aspect that not only cities are growing in number but rural community is adopting urban culture, no longer rural communities are retaining their unique rural culture. Rural people are following the material culture of urban people. Urban rural transformation can be observed in the following areas.

### **Spread of education:**

The literacy rate has increased among the rural people. They have become more modernized

1. Change in dress habits.
2. Adoption of modern technology.
3. Enlightenment of women.
4. Modern transport and communication E.g. Cell phones have become common even among rural people.
5. Active involvement on politics.
6. Growth of infrastructure like Banks, Post office.
7. Awareness among rural consumers.
8. Increasing demand for sophisticated product like cosmetics etc.

Thus it can be noticed that are significant changes in life style of village people. India village have adopted urban culture and urban style of living. However, all villages in India are not transformed. Only certain villages situated close to cities have been transformed.



## Urbanization Causes and Effect of Urbanization in India:

Urbanization has become a common feature of India society. Growth of industries has contributed to growth of cities. As a result of industrialization people have started moving toward the industrial areas in search of employment. This has resulted in the growth of towns and cities.

### **Causes of urbanization:**

Various reasons have led to the growth of cities. They are as follows:

#### **i. Industrialization:**

Industrialization is a major cause of urbanization. It has expanded the employment opportunities. Rural people have migrated to cities on account of better employment opportunities.

#### **ii. Social factors:**

Many social factors such as attraction of cities, better standard of living, better educational facilities, need for status also induce people to migrate to cities.

#### **iii. Employment opportunities:**

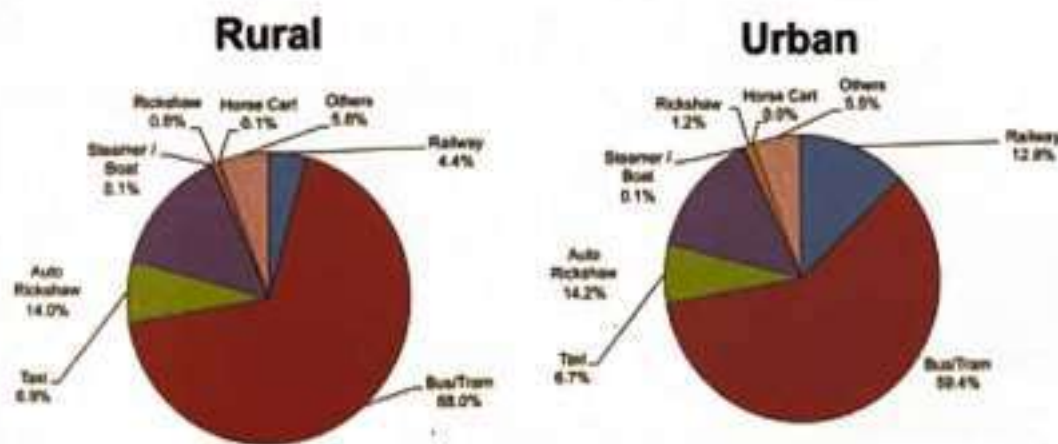
In rural sector people have to depend mainly on agriculture for their livelihood. But India agriculture is depending on monsoon. In drought situation or natural calamities, rural people have to migrate to cities.

#### **iv. Modernization:**

Urban areas are characterized by sophisticated technology better infrastructure communication, medical facilities, etc. people feel that they can lead a comfortable life city and migrate to cities.

## CAUSES OF URBANIZATION

Urbanization usually occurs when people move from village to cities settle, in hope of higher standard of living. This usually takes place in developing countries. In rural areas, people become victims of unpredictable weather conditions such as drought and floods, which can adversely affect their livelihood. Consequently many framers move to cities in search of better life. This be seen in Karnataka as well as where framer's from Raichur. Gulbarga districts which are drought-stricken areas, migrate to Bangalore to escape poverty. Cities in contrast, offer opportunities of high living and are known to be replace where wealth and money are centralized. Most industries and educational institutions are located in cities whereas there are limited opportunities within rural areas. This further contributes to migration to cities. This graph indicates the shift of population from rural areas to urban are...





## EFFECTS

### **Effect of urbanization:**

With a high rate of urbanization significant changes have taken place. The effect of urbanization can be summed up as follows:

### **Positive effect:**

- I. Migration of rural people to urban areas.
- II. Employment opportunities in urban centers.
- III. Transport and communication facilities.
- IV. Education facilities.
- V. Increase in the standard of living

Urbanization can yield positive effects if placed up to a desirable limit.

Extensive urbanization or indiscriminate growth of cities may result in adverse effects. They may be as follows:

### **a) Problem of over population:**

Concentration of population is a major problem of cities. It has resulted in accommodation problems, growth of slums etc.

### **b) Disintegration of joint family:**

Joint family can't be maintained in cities on account of high cost of living. People prefer to live in nuclear type of families.

### **c) Cost of living:**

High cost of living is a major problem of cities. In metro cities like Mumbai, Bangalore, etc. it is very difficult for lower income groups to maintain a decent standard of living.

**d) Increase in crime rate:**

Urban centers are known for high rate of crimes. Theft, Dacoit, Murder, cheating, Pick pocketing, rape, etc. are common in urban centers.

**e) Impersonal relation:**

Urban centers are characterized by highly secondary relations. The concept of neighborhood, community life are almost absent in cities. Urban life is highly monotonous. This may have an adverse psychological effect on individuals. People are often self centre and they have no concern for the fellow human beings

**f) Problem of pollution:**

In industrialized cities pollution is a major problem. It may be caused by industries or by excessive movement of vehicles.

**g) Stress:**

Urban life is characterized by stress which may even strain family relations. In cities employment of women is almost inevitable to meet the increasing cost of living. Changing role of women in family creates stress in the family which may result in divorce or strained relations. Thus urbanization has own merits and demerits. Urbanization can't be avoided. But the negative effect of urbanization can be minimized.

**1) Poor living condition:**

Crowding and lack of sanitation are main problems. This contributes to outbreak of diseases. Utilities such as water, electricity and sewage disposal are also scarce.

**2) Unemployment:**

Since the number of people competing for jobs is more than job available, unemployment is an inevitable problem.

**VIVEKANAND COLLEGE KOLHAPUR (AUTONOMOUS)**PROJECT REPORT RECORD SUB: **ENVIRONMENTAL STUDIES****B SC Biotech Part II 2021 – 2022**

<b>SR.NO.</b>	<b>NAME OF THE STUDENT</b>	<b>ROLL NO</b>	<b>PROJECT REPORT TITLE</b>
1	ARAB JAKIYA ABDULMAJID	9202	Effect of urbanization on environment
2	PARKAR SIDDHI SUNIL	9226	
3	KADAM ANIKET BALASAHEB	9215	Radhanagari Wildlife sanctuary
4	SHARMA ADITYA N	9240	
5	MANE UTKARSHA GAJENDRA	9223	
6	CHIKHALE ROSHAN PRAKASH	9208	
7	SHINDE SWANAND ARUN	9242	
8	SURVE MAITHILI VIKRANT	9245	Limnology study : Lake ecology
9	SAVARDEKAR VAISHNAVI U	9237	
10	PATIL DIVYA SURESH	9230	
11	KAMBLE EKATA HEMANT	9216	
12	KULKARNI GAYATRI R	9221	
13	SHAH MEDINEE PRASANNA	9238	Impact of water hyacinth
14	KORANE PRATIKSHA TANAJI	9219	
15	WADAKAR SHREYA SUNIL	9249	
16	PATIL AVADHOOT MOHAN	9229	
17	ANJALI RAJENDRA PATIL	9228	Traditional & modern agricultural practices : Benefits, drawbacks
18	PATIL RUTUJA ANANDRAO	9233	
19	PATIL SHWETA TANAJI	9234	
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23	SUTAR SNEHA VIKAS	9246	
24	DESHPANDE VAIBHAVI HARISH	9211	
25	INAMDAR VARDHA RAHUL	9214	
26	AARYA VIJAY PATIL	9126	Sustainable agriculture with use of biopesticides
27	PATIL VAISHNAVI RAJENDRA	9235	
28	WADEYAR MADHUMITA M	9250	
29	TAHASILDAR SANIKA SAMRAT	9247	
30	PATIL PORNIMA YUVRAJ	9232	Importance & various values of biodiversity
31	ALAVE AARYA RAJENDRA	9201	
32	ATHANIKAR SABIRA NIJAM	9203	

33	CHAVAN PRATIKSHA ANANDA	Solid Waste Mgt at domestic level
34	KAMBLE MRUNALI SHAHAJI	
35	VARUTE ANKITA A	
36	PATIL NAMRATA D	
37	SIDDHANAİK RADHIKA BAPU	
38	MANE UTKARSHA GAJENDRA	
39	PALKAR SHARVARI MANIKSEN	Water pollution
40	SARNAİK PRATHAMESH KIRAN	
41	CHOUGULE KSHITIJ J	
42	MADHALE SHUBHAM R	
43	SHINDE SHUBHAM SUBHASH	Biomedical waste
44	KOSHTI SHRIDHAR SHRIKANT	
45	BEDEKAR PRANAV ANIL	
46	GHORPADE PRITAM RAMESH	
47	SHIRKE HARSHWARDHAN D	
48	SHAIKH FIRAS DILAWAR	



**Mr. A. S. Kadam**

Head,

Department of Environmental Studies  
Vivekanand College, Kolhapur.





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- Shikshanmaharshi Dr. Bapuji Salunke  
**Shri Swami Vivekanand Shikshan Sanstha's**  
**Vivekanand College, Kolhapur**  
**(Autonomous)**



**B. Voc Advance Diploma In Photography & Videography- Part II**  
**Final Year Project Details**  
**Academic Year: 2021-2022**

Sr. No	Name of Student	Projects Guide	Name of Project
1	KAMBLE SAURABH RAMESH	Mangesh Khole	Rankala Video
2	KHANVALKAR SHREYA VINAYAK	Mangesh Khole	Rankala Video
3	NIMBALKAR VAIBHAVI ARVIND	Mangesh Khole	Rankala Video
4	PADASALGIKAR SHILPA JAYANT	Mangesh Khole	Rankala Video
5	YADAV OMKAR ANIL	Mangesh Khole	Rankala Video

*For Asst.*  
**Mr. Raviraj Sutar**  
**Head,**  
**Dept. of Photography and Videography**



"Education for Knowledge, Science, and Culture"

Shikshanamaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

**Vivekanand College, Kolhapur**  
**(Autonomous)**



**CC Advance Diploma In Photography - Part II**  
**Final Year Project Details**  
**Academic Year: 2021-2022**

Sr. No	Name of Student	Projects Guide	Name of Project
1	CHOUGULE PRANIT GAUTAM	Raviraj Sutar	Landscape
2	GAIKWAD UNMESH VIJAY	Raviraj Sutar	Landscape
3	KULKARNI ROHAN RAVINDRA	Raviraj Sutar	Landscape
4	LADE VIKRANT SHIVAJI	Raviraj Sutar	Landscape
5	MIRASHI ONKAR SUSHIL	Raviraj Sutar	Landscape
6	MOHITE ANISH PRAMOD	Raviraj Sutar	Landscape
7	DADARNE RUSHIKESH GANPATI	Raviraj Sutar	Landscape
8	PATIL PRANAV SURESH	Raviraj Sutar	Landscape
9	DESAI KAVERI GIRISH	Raviraj Sutar	Landscape

(For) *Agkwt*

Mr. Raviraj Sutar  
Head,

Dept. of Photography and Videography



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**Vivekanand College, Kolhapur**  
**(Autonomous)**



**B. Voc Diploma In Photography & Videography- Part I**  
**Final Year Project Details 2021-22**

Sr. No	Name of Student	Projects Guide	Name of Project
1	AWALE SWAPNIL YASHWANT	Mangesh Khole	Superstation
2	BANCHHODE TANVI JITENDRA	Mangesh Khole	Superstation
3	BHIVASE PRANAV RAJARAM	Mangesh Khole	Superstation
4	CHAVAN OMKAR PRASHANT	Mangesh Khole	Superstation
5	DAGADE KISAN KUMAR	Mangesh Khole	Superstation
6	KATKAR NIRANJAN SACHIN	Mangesh Khole	Superstation
7	KHANDEKAR ADARSH VISHWAS	Mangesh Khole	Superstation
8	KHOT PRATIK RAMGONDA	Mangesh Khole	Superstation
9	KOLEKAR SAYALI DNYANDEV	Raviraj Sutar	Rankala Polution
10	KSHIRSAGAR MANALI PRAMOD	Raviraj Sutar	Rankala Pollution
11	LATKAR SHIVANI DEEPAK	Raviraj Sutar	Rankala Pollution
12	MASALKAR YASH PRAKASH	Raviraj Sutar	Rankala Polution
13	MOJES NANCY MICHAEL	Raviraj Sutar	Rankala Pollution
14	MUJAWAR ARMAN RASHID	Raviraj Sutar	Rankala Pollution
15	PARIT RUSHIKESH AMRUT	Raviraj Sutar	Rankala Pollution
16	PATIL PRATHAMESH AVINASH	Rushikesh Goni	Street Photography
17	SAKHRE AVANTIKA ABHIJEET	Rushikesh Goni	Street Photography
18	SATHE ANANJAY ANIL	Rushikesh Goni	Street Photography
19	SHETE SANKET RAJENDRA	Rushikesh Goni	Street Photography
20	RANE SUMIT SANTOSH	Rushikesh Goni	Street Photography

For *Asst.*  
Mr. Raviraj Sutar  
Head,  
Dept. of Photography and Videography





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**Vivekanand College, Kolhapur**  
**(Autonomous)**

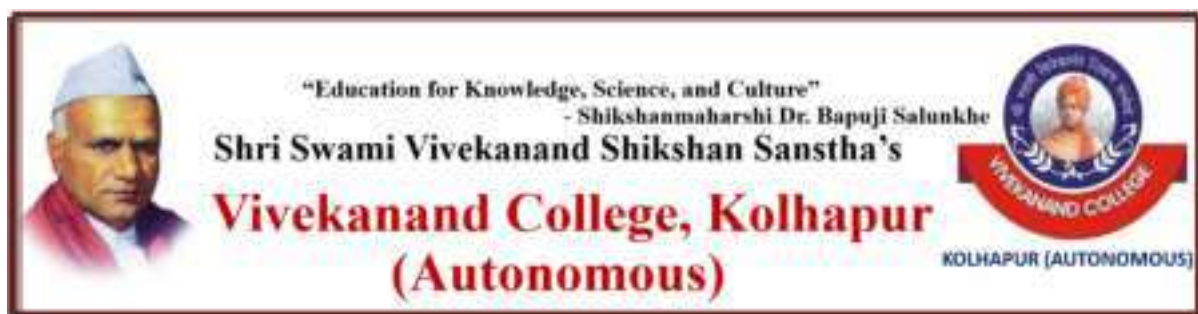


**CC Diploma In Photography - Part I**  
**Final Year Project Details**  
**Academic Year: 2021-2022**

Sr. No	Name of Student	Projects Guide	Name of Project
1	DONGARE JAY DINKAR	Mangesh Khole	Superstation
2	GHARAL PRATHAMESH SUNIL	Mangesh Khole	Superstation
3	KUMBHAR SUYOG JOTIRAM	Mangesh Khole	Superstation
4	LOKARE SUKHADEV MARUTI	Mangesh Khole	Superstation
5	PATIL ONKAR NIVAS	Mangesh Khole	Superstation
6	PATIL SHREYAS SANJAY	Mangesh Khole	Superstation
7	PIRJADE SOHEB ISMAIL	Mangesh Khole	Superstation
8	SALOKHE ATHARVA ARVIND	Mangesh Khole	Superstation
9	SUTAR SUNIL SHANKAR	Raviraj Sutar	Rankala Polution
10	TARATE ASWAJEET HAMBIRRAO	Raviraj Sutar	Rankala Polution
11	PATIL MAHESH KRUSHNAT	Raviraj Sutar	Rankala Polution
12	KOLEKAR PRADEEP NARAYAN	Raviraj Sutar	Rankala Polution

*For Assnt.*  
**Mr. Raviraj Sutar**  
**Head,**  
**Dept. of Photography and Videography**





### B.Com. Part II Student Projects 2021-22

Sr. No.	Name of the Student	Title of Project
1	Samruddhi Atul Chandgude	Impact Of Natural Disaster
2	Pinky Umesh Bhadrecha	Importance & Various Values Biodiversity
3	Afiya Munawar Lambe	
4	Afrin Akhtar Patavegar	
5	Revati Prasad Mokashi	
6	Shweta Nilkanth Gatade	
7	Mali Shridhar Ananda	Studies Of Natural Resources From Kolhapur District
8	Nikam Sumit Santosh	
9	Nimbalkar Yuvraj Arun	
10	Kamble Sumit Subhash	
11	Patil Sourabh Sambhaji	
12	Shashikumar Halkarni	Impact Of Natural Disaster On Environment And Society
13	Pratik S Jadhav	
14	Pranav P Powar	
15	Prathamesh S Shinde	
16	Aniket P Darekar	
17	Rutuja Baban Gavas	Traditional And Modern Agricultural Practices - Benefits And Drawback
18	Shivani Suhas Sawant	
19	Shraddha Sanjay Karande	
20	Shravani Satessh Lolage	
21	Sagare Akshada Suresh	Conservation Of Biodiversity
22	Patil Sayali Anandrao	
23	Patil Utkarsha Rajendra	
24	Patil Neha Pralhad	
25	Dashwant Asmita Mahesh	Impact Of Manmade Disaster On Environment
26	Vichare Sakshi Manoj	
27	Nikam Divya Dasharath	
28	Patil Anuja Nitin	
29	Katkar Harshwardhan Sanjay	
30	Manasi Sandeep Chitruk.	Status Of Lakes In Kolhapur City

31	Shraddha Krishnat Patil.	Studies Of Natural Resources From Kolhapur District
32	Shreya Subhash Patil.	
33	Shweta Shrikrishna Raut.	
34	Basavraj Babasaheb Patil	
35	Suresh Hariram Sutar	
36	Akshat Ashok Wadhwa	
37	Harshwardhan Shivaji Zambare	
38	Isha Indrajeet Samant	Disposal Of Waste
39	Puja Shivaji Patil	
40	Sanika Vikas Patil	Disposal And Management Of Waste
41	Laxmi HiranandMulchandani.-	
42	Siddhi Satwashil Patil	
43	Sharvari Deepak Kamble	
44	Shejal Ramesh Kamble	Status Of Various Lakes In Kolhapur City
45	Pranoti Nitin Rasal	
46	Shreya Prakash Shetty	
47	Pratiksha Suhas Bhosale	Study Of Marine Water Pollution
48	Ashiya Yasin Hajari	
49	Digvijay Ramesh Dinde	
50	Mahendra Sopan Patil	
51	Sakshi Prakash Patil	
52	Dipti Arjun Bhadavankar	Study Of Various Ecosystem (Lake Water, River Water, Forest & Pond Water)
53	Padmavati Uttam Patil	
54	Komal Shankar Veer	
55	Rutuja Vijay Potdar	Endangered Species Of India
56	Rutuja Maruti Koli	
57	Rohit Rajaram Farne	
58	Viraj Umesh Patil	Disposal And Management Of E-Waste
59	Varun Bajirao Kamble	
60	Nilesh Nanaso Kamble	
61	Shrividyadhar Prasad Sherkar	
62	Shrivardhan Shinde	
63	Gaurav Patil	Use Of Geo-Thermal Energy For Better Environment
64	Shreya Dudhgaonkar	
65	Aarya Panvalkar	
66	Shubham Chandrakant Kamble	Disposal & Management Of Waste I.E. Recycling, Reuse, Reprocessing
67	Sangram JotibaMasarankar	
68	Gite Nitesh A.	
69	Sangram Vijay Desai	

70	Vaibhavi Kankekar	Impact Of Natural Disasters Of Environment & Society.
71	Shraddha Firange	
72	Sai Nalage	
73	Pranali Karekar	
74	Rasika Salunkhe	
75	Veronica Sharan Nadar	Impact Of Natural Disaster On Environment And Society
76	Anoushka Dinesh Jadhav	
77	Rajnandini Sangram Ingle	
78	Advait Nitin Mohite	
79	Megha Ishwar Jagtap	Study Of Environmental Pollution
80	Shruti Shridhar Acharya	
81	Vaishnavi Sunil Devakar	
82	Chopdar Vidula Vijay	Disposal And Management Of Waste I.E Recycling, Reuse And Reprocessing
83	Madvanna Dhanashree Vijay	
84	Upadhye Vrushali Dadaso	
85	Sharanya Ravindra Shetty	Man And Wild Life Conflicts
86	Sakshi Sanjay Birajdar	
87	Kranti Suryakant Dodmise	
88	Shruti Ravindra Desai	
89	Shruti Pravin Yedekar	Study Of Various Ecosystems
90	Sakshi Sanjay Yadav	
91	Divya Mahesh Gavali	
92	Prajakta Hosure	Disposal And Management Of Waste I.E Reduce, Reuse, Recycle
93	Sakshi More	
94	Prajakta Prakash Patil	Importance & Various Values Of Bio-Diversity
95	Shraddha Jotiram Shinde	
96	Tejaswinee Anil Vibhute	Study Of Types Of Environmental Pollution
97	Anuradha Dhondiram Patil	
98	Killedar Pranali Nagesh	Natural Disasters
99	Ananya Mandar Joshi	Slum Areas And Associated Problems
100	Shreyash Kanbargi	Use Of Alternative Technology For Better Environment: Solar Energy
101	Atharva Patil	
102	Shahid Khan	
103	Yash Jadhav Sarnaik	
104	Om Korgaonkar	
105	Rachana Balaso Mane	Chandoli National Park
106	Pranali Pandurang Patil	
107	Shweta Pandit Patil	

108	Nikita Rajendra Pawar	Impact Of Plastic On Environment
109	Sharvari Sanjay Patil	
110	Mayuri Maruti Dalavi	
111	Anushka Vishwas Karande	
112	Suraj Pandurang Sutar	
113	Vinod Thanmal Mali	
114	Pramod Uttam Patil	
115	Vaishnavi Sudhir Chavan	
116	Lambe Shweta	
117	Anuradha Jagannath Kapase	Conservation Of Biodiversity
118	Sakshi Tanaji Lad	
119	Kasturi Shailesh Chavan	Importance And Various Values Of Biodiversity
120	Saisrivalli Kompella	
121	Mansi Mahavir Patil	
122	Mansi Ramesh Patil	
123	Stuti Prasad Shetty	
124	Ankita Anant Dalavi	
125	Manjusha Maruti Kasalkar	
126	Pritam Adinath Khochage	
127	Sachin Jivalappa Rathod	
128	Atul Ravindra Atigre	
129	Narendra Namdev Katkar	Study Of Various Types Of Environmental Pollution- 'Water Pollution'
130	Ashitosh Ajit Karangale	
131	Rajnandani Vikas Ulape	
132	Janki JinnappaDodamani	
133	Soniya Suryakant More	
134	Bhoite Sourabh Sanjay	Traditional And Modern Agriculture Practice
135	Jumana Bhoiri	Disposal & Management Of Waste I.E. Recycling , Reuse ,Reprocessing
136	Chetali Jain	
137	Hitesh Naresh Kukreja	Impact Of Manmade Hazards On Environment
138	Mustakim Sabir Bagwan	
139	Chand Jamir Momin	
140	Sakshi Shripati Valake	Antibiotics And Their Effect On Health
141	Harshada Raju Humbe	
142	Tejas Jotiram Kumbhar	
143	Priyanka Balaso Lad	
144	Pratiksha Anil Gurav	
145	Aditya Pawar	E - Waste Management
146	Rajvardhan Desai	
147	Sanket Yadav	
148	Jatin Chougule.	



149	Dabade Yash N.	
150	Aishwarya Raviraj Shetty	Study Of Effluent Treatment Plant
151	Vaishali Gajamal Bahiram	
152	Santoshi Raju Malwadkar	
153	Samiksha Rahul Patil	
154	Arshad Makandar	Study Of Various Types Of Environmental Pollution, - Air Pollution
155	Rahim Sayyad	
156	Tejas, Kamble	
157	Yogesh Deshmukh	
158	Bhumika Hanamantrao Butta	Impact Of Natural Disaster On Environment Society
159	Aarti Dnyandev Patil	
160	Sakshi Shivaji Injar	
161	Sandhya Ashok Rajigare	
162	Buddhabhushan Kamble	Water Management
163	Sakshi KrushnatChougale	Endangered Species Of India
164	Abhay Nikam	Impact Of Natural Disaster
165	Piyush Pawar	Chernobyl Disaster
166	Deepti Naik	
167	Kirti Jadhav	
168	Siddharth Tipugde	
169	Rushikesh Patil	
170	Gouri Shiva Tawarakhed	Impact Of Natural Disasters
171	Bhishek Manoj Mane	Study Of Various Ecosystem
172	Rohit Babaso Chougale	
173	Saurabh Popat Padval	
174	Samruddhi Anil Sankpal	Impact Of Natural Disasters On Environment And Society
175	Pooja Mahesh More	
176	Anushka Vijay Injar	
177	Vaibhavi KundalikChougale	
178	Alfiya Jamir Bagwan	Human And Wildlife Conflict
179	Sneha Sangram Kamble	
180	Rumana Shakil Patvegar	
181	Ifat Masjid Chaus	
182	Arbaj Ramazan Mujawar	Impact Of Natural Disasters
183	Pratiksha Sachin Shete	Impact Of Indian Festival On Environment
184	Vaishnavi Ramchandara Mali	
185	Siddhi Babaso Lohar	
186	Saniya Salim Mujawar	
187	Sumit Tilakdhari Prasad	
188	Darshan Ajit Patil	Use Of Alternative Technologies For Better Environment

189	Parth Rajendra Patil	
190	Aniket G Dhangekar	Organic Farming
191	Pranav S Kumbhar	
192	Vishal V Patil	
193	Bharat D Sutar	
194	Indrajeet V Kundalkar	
195	Dipali Lahu Padekar	Human Life & Wild Life Conflicts
196	Shital Sarjerao Khot	
197	Ashwini Narayan Gudamewar	
198	Kiran Rajendra Patil	
199	Pranjal Neminath Chaugule	
200	Shruti Manoj Kate	Status Of Various Lakes In Kolhapur
201	Vikrant Bajirao Patil	Studies About Global Warming.
202	Kaustubh Sunil Raorane	
203	Roshan Subhash Fokane	
204	Prathamesh Vijay Patil	
205	Shubham Dhanaji Chougule	
206	Akshat Girish Shah	Conservation Of Biodiversity
207	Keshrani(Patel) Harshi Tulsi	
208	Chavan Manasi Ashok	
209	Dhamanage Sanika Shantinath	
210	Badekar Pratiksha Balaso	
211	Ambekar Abhishek Rajendra	
212	Shivam Ganpat Karadkar	Air Pollution
213	Dhairiyashil Mahesh Patil	
214	Niranjana Ravindra Patil	
215	Yash Chandrakant Raut	
216	Mayuri Raju Gavali	Status Of Various Lakes In Kolhapur
217	Sudha Maruti Patil	Ocean Pollution
218	Alisha Shakil Naikwadi	
219	Vinayak Siddheshwar Shinde	Traditional & Modern Agriculture
220	Prathamesh Abhay Jadhav	
221	Yash Jaisinghani	
222	Yash Chandrakant Shinde	Traditional Modern Agriculture
223	Mannan Samir Momin	
224	Arbaj Mujawar	Impact Of Natural Disasters On Environment And Society
225	Saad Shaikh	
226	Samir Shaikh	
227	Gautam Rajan Nishad	Air Pollution
228	Amruta Rajaram Kamble	Organic Farming

229	Omkar Vinayak Kurane	Conservation Of Biodiversity
230	Harshit Nitin Muchandikar	
231	Karan Jigneshkumar Patel	
232	Bhakti Shital Gandhi	Use Of Alternative Technologies For Better Environment
233	Maithili Rahul Kulkarni	
234	Asim Saddiq Memon	
235	Tanmay Khanvalkar	Study Of Various Types Of Pollution
236	Soham Lad	
237	Samiksha Kanire	
238	Purohit Prithwi	
239	Pratiksha Murali	
240	Sourabh Sanjay Khanvilkar	Study Of Various Types Of Environmental Pollution
241	Gaurav Ganesh Deshingkar	
242	Parth Vasant Patel	
243	Suarj Sanjay Patil	
244	Tejas Sanjay Patil	
245	Bhagyashri Rajesh Patil	Traditional And Modern Agriculture
246	Shwetali Sutar	Disposal And Management Of Waste Ie. Reduce, Recycle And Reuse
247	Parth Sutar	
248	Padmabhushan Throat	
249	Aniket Khot	
250	Shardul Rajan Ramtirthkar	Plastic Waste And Its Impact On Environment And Ocean Ecosystem
251	Prathamesh Sachin Koli	
252	Bhuvan Shankar Sharbidre	
253	Sadaf Momin	Plastic Waste And Its Impact On Environment
254	Shruti Suryavanshi	
255	Shreya Mardane	
256	Saniya Santani 6651	Impact Of Natural Disasters On Environment And Society
257	SuwebaKacchi 6485	
258	Manas Parmar 6585	
259	Bhakti Oswal 6580	
260	Khushi Oswal 6581	
261	Siddhesh Sandeep Kalekar	Impact of natural disasters on environment and society
262	Riddesh Sandeep Kalekar	
263	Bandi Gunesh	Impacts of urbanization
264	Sapte Sonia	Natural disasters
265	Kanade Saloni	
266	Shaikh Sanofar	Threats to Biodiversity
267	Shaikh Tanvin	

268	Kidgaonkar Shahu	Traditional & Modern Agriculture
269	Nihal Taral	
270	Shetty Yash	
271	Desai Pratiksha	Organic Farming
272	Gaikwad Padmasinh	Natural disasters
273	Dhavale Aarati	
274	Kamble Anushka	Study of diverse effects on Biodiversity
275	Navale Mukta	
276	Mulla Siayma	
277	Khot Samruddhi	
278	Shinde Siddhant	Environmental Pollution
279	Gaikwad Rutuja	
280	Yadav Rutuja	Slum Area
281	Pakhare Vaishnavi	Water Pollution
282	Battewar Prachi	Disposal & Management of Waste
283	Bange Chitra	Water Pollution
284	Ghorpade Isha	
285	Ahuja Mohnish	Impact of Natural Disaster
286	Sawant Karan	
287	Salunkhe Sumit	
288	Chougule Vrushabh	
289	Patil Aniket	GHE & GW
290	Mane Vishal	Status of various lakes
291	Londhe Harshal	
292	Dabhade Rudra	
293	Nille Prathamesh	Urbanization
294	Tamboli Amaan	
295	Suryawanshi Ashish	
296	Ustad Anisha	Slum areas
297	Bargule Saurabh	Impact Of Plastic
298	Chavan Omkar	Organic Farming

### B.Com. Part II Marathi Medium Projects 2021-22

SR.NO.	NAME OF THE STUDENT	PROJECT REPORT TITLE
1	संध्याबाळासाहेब कोळी	जैवविविधतेचा अभ्यास
2	अंकिताबाळासाहेब माजगावकर	जैवविविधता आणि तिचे संवर्धन.
3	निकीतासंजय तिळवे	
4	स्वप्नालीमारुती तावडे	
5	आकांक्षारविंद्र पाटील	
6	आसमाजहांगीर गवंडी	



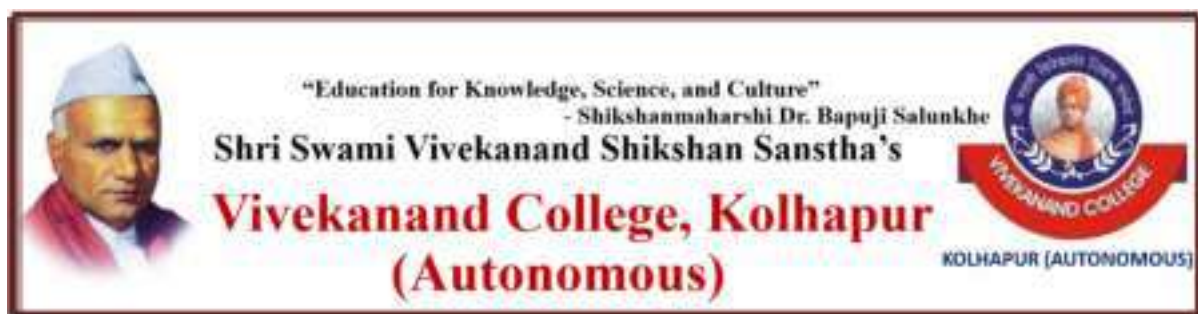
7	आर्शियाजमीर मुल्ता	भूजलपातळी कमी होण्याची कारणे ,परिणाम आणि उपाययोजना यांचा अभ्यास
8	रुपालीरमेश पाटील	
9	अक्षतादादासो पाटील	
10	आरतीअर्जुन कोळी	भारतीय सण आणि पर्यावरण
11	प्राचीपंडित लाड	
12	प्रियांकाशंकर मुरावणे	
13	दिशा दिलीपपाटील	
14	समिक्षाबाबासो पाटील	
15	संध्यासुभाष गायकवाड	प्रदूषणामुळेपर्यावरणावर होणारे परिणाम
16	वैष्णवीयुवराज पाटील	
17	स्नेहलसरदार खवरे	
18	सोनालीसागर माने	
19	सत्यजितपोळ	विविधमानवनिर्मित आपत्तींचा अभ्यास
20	श्रेयशखोत	
21	विशालघाटगे	
22	जुबेरनदाफ	
23	स्नेहलप्रभाकर ठाकरे	तीर्थक्षेत्राचेपर्यावरणीय दृष्टीने सर्वेक्षण
24	सानिकाशशिकांत मिटके	
25	मयुरीभैरवनाथ जासूद	जैवविविधतेच्यास्थळांचा अभ्यास
26	कोमलशिवाजी बनसोडे	
27	प्रितीजानबा सावंत	
28	सानिकायुवराज पाटील	
29	वैष्णवीअमर पाटील	
30	ऐश्वर्याराजेंद्र गवसे	पर्यावरणशिक्षण आणि जल सुरक्षा याचा अभ्यास
31	पायल राजूसुतार	
32	स्नेहलसुनिल पडवळ.	
33	रोहितरघुनाथ पाटील.	
34	ओंकार संजयगवळी.	भारतातीलराष्ट्रीय उद्याने आणि अभयारण्य यांचा अभ्यास
35	ऋषिकेशराजाराम खोत	
36	आदित्यदिलीप पाटील	
37	विनायकशिवाजी मोरे	
38	विजय विलासमाने	
39	अवधूत संजयमाने	

40	साक्षीभारत कांबळे	जैवविविधतेतआढळणाऱ्या औषधी वनस्पतीचा अभ्यास
41	साक्षीकिरण कांबळे	
42	श्रेयामिलिंद माळी	
43	निकितासागर नलवडे	जैवविविधतेचा अभ्यास
44	अनुराधाविश्वनाथ ढेरे	
45	रियामुबारक मुल्ला	
46	साक्षीअरुण मांडरेकर	पर्यावरणाचाआरोग्यावर परिणाम
47	जोया जुनेदमोमीन	
48	अलिशा समीरमुल्लाणी	
49	तहीरहु सेनअत्तार - 6703	विविधप्रकारच्या पर्यावरणीय प्रदूषणाचा अभ्यास
50	उमेशकडकोळ - 6722	
51	शंकर कोळी - 6732	
52	निशांतवाधवाणी - 6782	
53	सत्यजितपोळ	विविधनैसर्गिक आपत्तींचा अभ्यास - कारणे परिणाम व उपाय
54	श्रेयशखोत	
55	विशालघाटगे	
56	जुबेरनदाफ	
57	ओमराजकोरे	
58	कांबळे प्रार्थना	घनकचरा व्यवस्थापन
59	माईणकर कादंबरी	
60	रणदिल संजना	
61	बुवा सृष्टी	
62	देसाई अमान	विविधनैसर्गिक आपत्तींचा अभ्यास - कारणे परिणाम व उपाय
63	देसाई खदिजा	
64	माने प्रणव	
65	इंगवले अनिकेत	
66	पोवार साहिल	
67	जाधव विशाल	जैवविविधतेचा अभ्यास
68	सातवणेकर दिग्विजय	
69	सरगरसमाधान	
70	फारणेरुषिकेश	
71	चौगुलेशुभम	
72	महाजन विशाल	जैवविविधतेचाअभ्यास
73	पाटील दुर्गा	घनकचरा व्यवस्थापन

74	हलिजवाले सुशांत	
75	बचनेति चैतन्य	
76	मालगुंडे सानिका	
77	शिंदे श्वेता	भूमी प्रदूषण



**Mr. A. S. Kadam**  
Head,  
Department of Environmental Studies  
Vivekanand College, Kolhapur.



### B.B.A. Part II Student Projects 2021-22

Sr. no.	Name of the Student	Title of Project
1	Patil Rushikesh	Effects of manmade disaster on environment and human beings
2	Kokate Sonali	
3	More Pranali	
4	Patil Priti	
5	Attar Mustakin	
6	Sahani Sarjana	A study of impact of Stone Crusher on Environment
7	Kamble Neha	
8	Rajpurohit MohitSingh	
9	Omase Anushka	
10	Jadhav Divya	Biodiversity
11	Devang Apurva	
12	Masal Dhanashri	
13	Desai Shivraj	
14	Mohite Kaushal	Study of Biodiversity
15	Jadhav Rutesh	
16	Shari Shubham	
17	Sarthak Nandgaonkar	
18	Chinmay Vasengaonkar	
19	Nogori Jayana	Study of Impact of E Waste
20	Patel Yoshita	
21	Jain Divya	
22	Kumthekar Shivraj	
23	Agarwal Sanskar	
24	Shaikh Sohaib	Air Pollution Issues in Kolhapur
25	Ghorpade Vaishnavi	
26	Saddar Muskan	
27	Patil Tejas	
28	Wankar Prathamesh	Global Warming
29	Gadgil Atharv	Nuclear Pollution
30	Mardane Anushka	Impact of Air Pollution on Environment



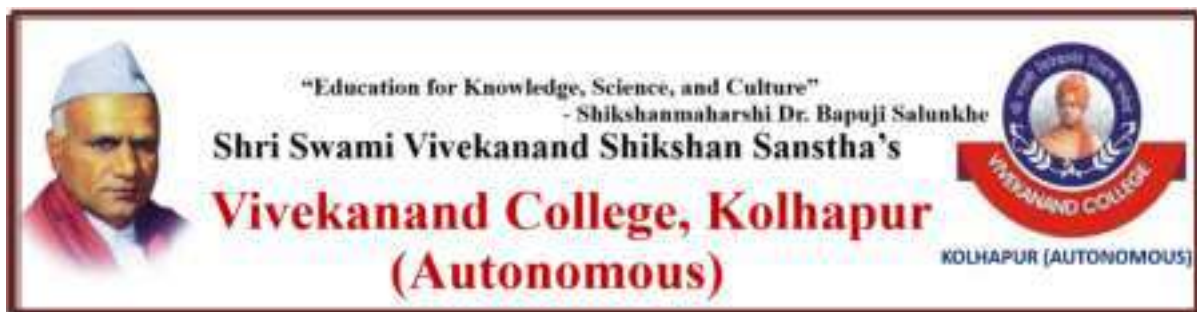
31	Kadam Radhika	
32	Wingakar Sakshi	
33	Sutar Savari	
34	Jadhav Tejas	
35	Kamble Maithili	Noise Pollution
36	Khandekar Sanika	
37	Naik Shweta	
38	Nili Pallavi	
39	Sav Lokesh	Wildlife and humans
40	JamdarGonsiya	
41	Kamble Vishal	
42	Mujawar Ziya	
43	Bille Vaibhavi	
44	Badawe Mokshita	
45	Saikode Krishna	A Study of Man and Wildlife Conflict
46	Patole Shahu	
47	Salgar Aditi	
48	Lokhande Sanika	
49	Patil Partha	Indoor Air Pollution
50	Jadhav Atharv	
51	Bhopale Sakshi	E Waste
52	Maldar Sifa	Water Pollution
53	Kmble Dhanashri	Ozone Depletion
54	Patil Rutika	
55	Khopkar Prathamesh	
56	Veldi Sejal	
57	Dhurve Siddharth	
58	Bagwan Ayesha	Human and Wildlife Conflict
59	Gavandi Ayesha	
60	Momin Afsha	
61	Nadaf Arzoo	Study of Various Ecosystems
62	Patil Yash	
63	Bhosale Sourabh	
64	Dhurve Sudesh	
65	Chavan Karansinh	
66	Patil Saniya	Disposal of E Waste
67	Parab Srushti	
68	Valagaddi Shweta	
69	Nalawade Pratiksha	
70	Parab Aniruddha	Preserving Environment
71	Patil Atharva	
72	Patil Bajrang	

73	Sahani Yash	Man And Wild Life
74	Mande Jayraj	
75	Pawar Prajwal	



**Mr. A. S. Kadam**

Vivekanand College, Kolhapur.  
Vivekanand College, Kolhapur.  
Vivekanand College, Kolhapur.



### B.C.A. Part II Student Projects 2021-22

Sr. No.	Name of the Student	Title of Project
1	Gokul Ganesh	Water Resources
2	PradymnWalawkar	
3	Warnar Mulla	
4	Rushikesh Pandare	
5	Arbaj Panhalkar	
6	Magdum Jyoti	Renewable Energy
7	Kavade Pramila	
8	Sangar Prerana	
9	Balloli Pratik	
10	Mokashi Tushar	
11	Ghodake Shreyash	CEPT, Kagal
12	Jambagi Prakash	
13	Karade Prathamesh	
14	Dhondakar Pramod	
15	Ambole Shreyash	
		Endangered and Extinct
16	Joshi Avdhoot	Flood in Kolhapur and Sangli
17	Pawar Samarth	
18	Patil Atharva	
19	Kumbhar Atharva	
20	Lotke Om	
21	Indulkar Prathmesh	
22	Mrje Abrar	Water Pollution
23	Mogal Khushboo	
24	MaldarSayma	
25	Sawant Siddharth	Water Pollution
26	Chandikar Akshay	
27	Shelke Uday	
28	Phanse Mohit	
29	Kshatriy Mohan	
30	Kumbhar Pooja	Water Pollution
31	Patil Prajakta	

32	Patil Shreyash	Solid Waste Management
33	Nikam Samir	
34	Sawant Saishwari	
35	Shelar Siddhi	
36	Shinde Vaishnavi	Study of Pollution of Rankala
37	Nadaf Huzaf	
38	Joshi Tanmay	
39	Pawar Rohit	
40	Mulla Kaif	
41	Gawande Shubham	
42	Magdum Shrawani	Waste Recycling
43	Diwse Tanvi	
44	Bhosale Derika	
45	Potdar Mrunali	
46	Naik Bhakti	
47	Lingras Saloni	Water Pollution and Public issues in Kolhapur
48	Pakhali Alsaba	
49	Bichu Saba	
50	Salokhe Rajlakshmi	
51	Gundakalli Sakshi	Geothermal Energy
52	Gaikwad Divya	
53	Unale Manvendra	
54	Ghotane Ayushi	
55	Suryavanshi Tejas	
56	Bawache Rutuja	Environmental Awareness
57	Koge Divya	
58	Aglawe Aarti	
59	Powar Harsh	Natural disasters
60	Kumbhar Tejas	
61	Patil Shreya	Environmental Pollution
62	Pawar Pallavi	
63	Ghatge Raturaj	
64	Bhaldar Sakib	Urbanization and its impact
65	Gilbile Roshni	
66	Sahasabuddhe Vaishnavi	
67	Golange Jaykumar	
68	Patil Shivani	Study of Distribution of Corals in india
69	Minache Sejal	
70	Kotmire Pornima	
71	Jitkar Tejashri	
72	Khambe Vaishnavi	
73	Lavhate Suhas	Effect of Fertilisers on Environment
74	Patil Kuthwade Nikhil	



75	Ghatge Rushikesh	Effect of Fertilisers on Environment
76	Mali Abhilasha	
77	Chougule Indrajit	
78	Yatam Sanket	
79	Mulla Makhalid	Study of Biodiversity
80	Malvi Pranil	
81	Jadhav Digvijay	Prevention of Animal Cruelty
82	Nikam Pranjwal	
83	Bhopale Sanika	Pollution
84	Ghorpade Rohan	
85	Sayma Patel	
86	Pooja Koli	Alternative Energy - Solar
87	Rushikesh Sawant	
88	Yash Kakade	

  
**Mr. A. S. Kadam**  
 Head,  
 Department of Environmental Studies  
 Vivekanand College, Koihapur.

**Vivekanand College, Kolhapur (Autonomous)**  
**Department of Foundry Technology**  
**Final Year Project Details**  
**Academic Year: 2021-2022**

<b>Sr. No</b>	<b>Name of Student</b>	<b>Projects Guide</b>	<b>Name of Project</b>
1	Shubham Kumar Patil	Mr. Sidhant Karnik	Effect of alloying elements on mechanical and micro- structural properties of Cast Iron
	Swapnil Sambhaji Chougule		
2	Om Govind Deshmukh	Mr. Sidhant Karnik	Change Management, change in process
	Aaftabh Mahammedhussain Gajbar		
3	Samket Sudhir Karvekar	Mr. Sidhant Karnik	Manufacturing Defects of Non-Ferrous products and its solution
	Vaibhav Mahadev Hirve		
4	Shravan Bajirao Kumbhar	Mr. Sidhant Karnik	Casting defect analysis of crankshaft
	Amit Vilas Salunkhe		
5	Dhananjay Suresh Patil	Mr. Sidhant Karnik	Auto turn- off cooling tower system for induction furnace
	Nitish Sukumar Kadam		
6	Omkar P Chikkorde	Mr. Sidhant Karnik	Robotic Arm used in Foundry
	Siddhesh P Maralkar		
7	Abhishek S Patil	Mr. Sidhant Karnik	Defect Minimization in Casting through Process Improvement
	Omkar Biranje		
8	Prathamesh Ananda Patil	Mr. Sidhant Karnik	Manufacturing of Borger of Rotary Lobe pump by shell molding process
	Vishal Sundar Kore		
9	Ujjwal P Kadam		Analysis of Cating Defects

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	Sourabh B Patil	Mr. Sidhant Karnik	
10	Omkar A Chougule	Mr. Sidhant Karnik	Casting defect analysis.
11	Abhijit R Patil Shreyash N Kulkarni	Mr. Sidhant Karnik	Elimination of Chunky Graphite



Mr. Siddhant Karnik

Project Guide

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**1****Internship****Mr. Nitish Kadam****Foundry Technology**

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PAN : AAOC8603A  
CIN : L27100PN2010PLC137493  
GSTIN : 27AAOC8603A1ZD



SGIL/HRD/2022


Date: - 11.06.2022

**CERTIFICATE**  
(TO WHOMSOEVER IT MAY CONCERN.)

This is to certify that **Mr. Nitish Sukumar Kadam**, a student of Diploma in Foundry Technology - 3<sup>rd</sup> Year from Vivekanand College, Kolhapur has successfully completed his internship in our organization from 15<sup>th</sup> February 2022 to 31<sup>st</sup> May 2022. During this period he was been found to be punctual and disciplined.

We wish him a bright future.

**For Synergy Green Industries Ltd.**

  
**Sanjay Patil**  
Manager - HR & Admin.

