

Value Added Course:
“Medicinal plants and their conservation”

Organized by

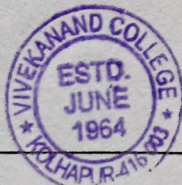
Department of Botany

Year

2019- 2020

Medicinal plants and their conservation

Department of Botany

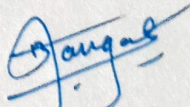


Vivekanand College, Kolhapur. (Autonomous)
Department of Botany
Value Added Course: "Medicinal Plants and their Conservation"
2019-2020

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Head
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)



Department of Botany

Value Added Course

"Medicinal plants and their conservation"



COURSE OUTCOME

After completion of the course, students will be able to

- Know the basic knowledge of available plant resources
- Acquire relevant information about medicinal plants with respect to parts used, chemical composition and uses

LIMITED SEATS

☎9420778093, 9420494380

"Education for Knowledge, Science and Culture."

– Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's, Kolhapur.

VIVEKANAND COLLEGE, KOLHAPUR. (AUTONOMOUS)

Department of Botany

1) Name of the Course:

"Medicinal Plants and their conservation"

2) Objective: 1. To know the diversity of plants.

2. To know the potential drug resources.

3. To know the technique of identification of drug resources.

4. Multiplication and conservation of drug resources.

3) Duration of the course: 3 months

4) Intake capacity: 40 students

5) Exam Pattern: Theory and Practical

1) Theory – 32 (hr.)

2) Practical - 14 (hr.)

6) Course Outcomes: On completion of the course, students will be able to:

1. Acquire the relevant information about medicinal plants with respect to identification, phytochemical content and utilization.

2. Know the techniques of harvesting and production of drug resources.

3. Know different methods of conservation of medicinal plants.

4. Understand importance of medicinal plants in medicine.

7) Syllabus:

Duration of the course: 46 hours

Section: I

"Importance and Characterization of Medicinal Plants"

32 hr.

Unit I: Importance of Medicinal plants in Medicine

6 hr.

1.1 : Traditional system of medicine

a) Siddha medicine

b) Ayurvedic medicine



c) Homeopathy medicine

d) Unani medicine

1.2 : Plants used in Homoeopathy

Unit II: Brief account of medicinal plants with respect to a) Systemic positions 12 hr.

b) Morphology c) Source of drug d) Chemical constituents or active principles e) Medicinal uses.

A. Underground parts – Roots : 1) *Rauvolfia serpentine* 2) *Withania somnifera*

B. Stem : 3) *Zingiber officinale* 4) *Glycyrrhiza glabra* 5) *Tinospora cordifolia*
6) *Cinnamomum zeylanicum*

C. Leaves : 7) *Adhathoda zeylanica* 8) *Ocimum tenuifolium* 9) *Aloe vera*

D. Flower : 10) *Syzygium aromaticum*

E. Fruit : 11) *Terminalia chebula* 12) *Terminalia bellerica* 13) *Embllica officinals*
14) *Azadirchata indica* 15) *Calotropis procera*

Section: II

“Methods of Conservation of Medicinal Plants ”

Unit III: Conservation Method 7 hr.

1. *In situ* conservation: Biosphere reserves, National parks, Wild life sanctuaries, Sacred grooves

2. *Ex situ* conservation: Botanical gardens, Field gene banks, Medicinal Plant conservation parks (MPCPs), Home herbal gardens (HHGs)

Unit IV: Biotechnological methods of conservation 7 hr.

a) Micropropagation

b) Cryopreservation

c) Production of active principles through tissue culture techniques

d) Seed bank

8) Practical Syllabus: 14 hr.

1) Identification of drug resources.

2) Phytochemical analysis of some medicinal plants .

3) Study of ayurvedic products.

9) Exam pattern:

a) Theory: 50 marks



b) Practical : 50 marks	
10) Nature of Question Paper for each paper	50 marks
Q1) Multiple choice questions	10 marks
Q2) Long answer questions (Any two)	20 marks
Q3) Short answer questions (Any four)	20 marks
Nature of Practical Examinations	50 marks
Q1) Identify , classify and give botanical name, plant parts used and uses of given specimen A and B	20 marks
Q2) Phytochemical analysis of given plant material C.	10 marks
Q3) Identification :	10 marks
a) Identify and comment D	
b) Identify and comment E	
Q4) a) Visit Report	05 marks
b) Journal	05 marks

Suggested Readings:

1. Gibbs, R.D. (1974) *Chemotaxonomy of flowering plants*. Mc. Gill Queen's University Press, Montreal. Pages 54-80.
2. Singh, Pande and Jain (2012) *Economic Botany*, Second edition, Rastogi Publications, Shivaji Road, Merrut.
3. V. Kumaresan (2015) *Herbal Biotechnology and Pharmacognasy*, Saras publication, Nagercoil, Kanyakumari, Tamil Nadu.
4. V. Kumaresan and N. Arumugam (2015) *Bioresources*, Saras publication, Nagercoil, Kanyakumari, Tamil Nadu.



b) Journal

05 marks

Suggested Readings :

1. V. Kumaresan (2015) Herbal Biotechnology and Pharmacognasy, Saras publication, Nagercoil, Kanyakumari, Tamil Nadu.
2. V. Kumaresan and N. Arumugam (2015) Bioresources, Saras publication, Nagercoil, Kanyakumari, Tamil Nadu.
3. Singh, Pande and Jain (2012) Economic Botany, Second edition, Rastogi Publications, Shivaji Road, Merrut.
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Shri Swami Vivekanand Shikshan Sanstha's, Kolhapur
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)

Date: 04/12/2019

NOTICE

Department of Botany is organizing Value Added Course entitled
"Medicinal plants and their conservation" in second term which commence from 1st
January 2020 (Academic year 2019-2020). Interested students can approach to Botany
department for the enrollment of the said course.

For [Signature]
Head

Department of Botany

Head
Department of Botany,
Vivekanand College
Kolhapur



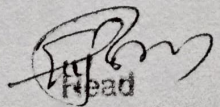
Department of Botany

COC : " Medicinal Plants and their Conservation "

Roll Numbers

Sr. No.	Name of Student	Roll No.
1	Shraddha Pandurang Patil	251
2	Shweta Pavan Majgaonkar	252
3	Shivani Subhash Swami	253
4	Siddhika Jahidahmad Bagwan	254
5	Alisha Jagannath Shinge	255
6	Ketaki Jaywant Sutar	256
7	Saipriya Srinivas Kampalapalli	257
8	Smita Jaysing Patil	258
9	Sumedh Suhas Bhagwan	259
10	Dharmaraj Maruti Kamble	260
11	Aditi Gurav	261
12	Minakshi Chandrashekar Sutar	262
13	Siddhi Satish Ghodake	263
14	Pratiksha Kerba Kamble	264
15	Ashwini Bajirao Barade	265
16	Shivani Sanjay Nikate	266
17	Siddhi Milind Chavan	267
18	Shubhangi Sardar Survanshi	268
19	Samati Aannaso Khot	269
20	Rushikesh Bhagavat Powar	270
21	Rushikesh Balasaheb Kadam	271
22	Swapnil Sardar Shinde	272
23	Vinayak Shahaji Pachpund	273
24	Omkar Ramchandra Khot	274
25	Sainath Vijay Pore	275
26	Suyag Sagar Upadhye	276
27	Rutvik Deepak Kore	277
28	Rushikesh Mallappa Kamble	278
29	Shivani Ramdas Khandare	279
30	Anil Parshuram Baygol	280
31	Dhanajay Kiran Bavache	281
32	Sayali Sandeep Khabade	282
33	Aashlesha Sanjay Mangnurkar	283
34	Suman Madhukar Gosavi	284
35	Mansi Satish Kale	285
36	INUS SHAQIR SHAIKH	286
37	Pranoti Prakash Jadhav	287



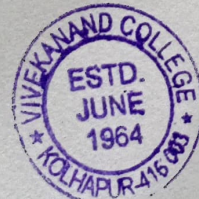

 Head
 Department of Botany
 Vivekanand College
 Kolhapur

Department of Botany

COC : " Medicinal Plants and their Conservation "

Student List

Sr. No.	Name of Student	Mobile No	Signature
1	Shraddha Pandurang Patil	7559298379	<i>Shraddha Patil</i>
2	Shweta Pavan Majgaonkar	8180804498	<i>Shweta Majgaonkar</i>
3	Shivani Subhash Swami	9767057445	<i>Shivani Swami</i>
4	Siddhika Jahidahmad Bagwan	9075724007	<i>Siddhika Bagwan</i>
5	Alisha Jagannath Shinge	9370995586	<i>Alisha Shinge</i>
6	Ketaki Jaywant Sutar	7020150918	<i>Ketaki Sutar</i>
7	Saipriya Srinivas Kampalapalli	9421539740	<i>Saipriya</i>
8	Smita Jaysing Patil	7517581296	<i>Smita Patil</i>
9	Sumedh Subhas Bhagwan	9373558960	<i>Sumedh Bhagwan</i>
10	Dharmaraj Maruti Kamble	9767898768	<i>Dharmaraj Kamble</i>
11	Aditi Shreechandra Gurav	9309703858	<i>Aditi Gurav</i>
12	Minakshi Chandrashekhar Sutar	9579869957	<i>Minakshi Sutar</i>
13	Siddhi Satish Ghodake	9970518807	<i>Siddhi Ghodake</i>
14	Pratiksha Kerba Kamble	9158325843	<i>Pratiksha Kamble</i>
15	Ashwini Bajirao Barade	9970223104	<i>Ashwini Barade</i>
16	Shivani Sanjay Nikate	9057968997	<i>Shivani Nikate</i>
17	Siddhi Milind Chavan	7028199651	<i>Siddhi Chavan</i>
18	Shubhangi Sardar Survanshi	75559497675	<i>Shubhangi Survanshi</i>
19	Samati Aannaso Khot	7767929108	<i>Samati Khot</i>
20	Rushikesh Bhagavat Powar	9022457872	<i>Rushikesh Powar</i>
21	Rushikesh Balasaheb Kadam	7058293046	<i>Rushikesh Kadam</i>
22	Swapnil Sardar Shinde	7066381090	<i>Swapnil Shinde</i>
23	Vinayak Shahaji Pachpund	7875682619	<i>Vinayak Pachpund</i>
24	Omkar Ramchandra Khot	7796721010	<i>Omkar Khot</i>
25	Sainath Vijay Pore	8669233154	<i>Sainath Pore</i>
26	Suyag Sagar Upadhye	8975999930	<i>Suyag Upadhye</i>
27	Rutvik Deepak Kore	7350220393	<i>Rutvik Kore</i>
28	Rushikesh Mallappa Kamble	7057405341	<i>Rushikesh Kamble</i>
29	Shivani Ramdas Khandare	9975960056	<i>Shivani Khandare</i>
30	Anil Parshuram Baygol	8459620102	<i>Anil Baygol</i>
31	Dhanajay Kiran Bavache	7676016606	<i>Dhanajay Bavache</i>
32	Manasi Satish Kale	9049417019	<i>Manasi Kale</i>
33	Sayali Sandeep Khabade	9156125978	<i>Sayali Khabade</i>
34	Aashlesha Sanjay Nanganurkar	9607403712	<i>Aashlesha Nanganurkar</i>
35	Suman Madhukar Gosavi	7057040287	<i>Suman Gosavi</i>
36	J. N. S. SHAIKH	9762643601	<i>J. N. S. Shaikh</i>
37	Pranoti Prakash Jadhav	9763731902	<i>Pranoti Jadhav</i>
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VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR

Department of Botany

COC : "Medicinal Plants and Their Conservation"

Total Marks : 30

- Instructions : 1. All question are compulsory
2. Each Question carries two marks

Q. 1. Choose correct alternative.

- 1) The roots of..... plant, used as antidote for the bites of poisonous reptiles and the stings of insects.
 - a) *Ocimum sanctum*
 - b) *Rauwolfia serpentina*
 - c) *Catharanthus roseus*
 - d) *Adhatoda zeylanica*
- 2) A medicine for bronchitis is extracted from.....
 - a) *Rauwolfia serpentina*
 - b) *Curcuma longa*
 - c) *Adhatoda zeylanica*
 - d) *Hemidesmus indicus*
- 3) The scientific name of Holy basil is -----.
 - a) *Ocimum tenuifolium*
 - b) *Ocimum basilicum*
 - c) *Catharanthus roseus*
 - d) *Cicer arietinum*
- 4) The common name of *Adhatoda zeylanica* is -----.
 - a) Neem
 - b) Adulsa
 - c) Holy Basil
 - d) Shatavari
- 5) An excised piece of stem tissue or leaf used in Micropropagation is
 - a) Medium
 - b) Scion
 - c) Explant
 - d) Microshoot
- 6) In artificial media, the growth of plant tissues is
 - a) Gene expression.
 - b) Cell hybridization.
 - c) Transgenesis
 - d) Plant tissue culture
- 7) Benefit of Clonal propagation or Micropropagation is
 - a) Multiplication of sexually derived sterile hybrids
 - b) Multiplication of disease free plants
 - c) Rapid multiplication of superior clones
 - d) All of these



8)is the branch of applied science that utilizes living organisms and their derivatives in order to produce products and processes.

- a) Plant Physiology b) Biotechnology c) Plant Ecology d) Plant Pathology

9) The botanical name of clove is

- a) *Embllica officinals* b) *Terminalia chebula*
c) *Syzygium aromaticum* d) *Calatropis procera*

10) ----- includes in method of In-situ conservation.

- a) Botanical garden b) Zoos c) National parks d) Cryopreservation

11) *Embllica officinals* (Awala) possess property.

- a) antibacterial b) anti-aging c) antifungal d) all of the above

12) *Calatropis procera* belongs to family

- a) asteraceae b) apocynaceae c) meliaceae d) fabaceae

13)..... possesses complex of various constituents including nimbin, nimbidin.

- a) *Azadirachta indica* b) *Embllica officinals*
c) *Calatropis procera* d) *Terminalia chebula*

14) The innermost zone of Biosphere reserve is -----.

- a) buffer zone b) core zone c) transition zone d) salient zone

15) ----- method of planting is used for the conservation of genes.

- a) Sacred groves b) Field gene bank
c) Biosphere reserve d) Zoos



Department of Botany

COC : " Medicinal Plants and their Conservation "

RESULT

Sr. No.	Name of Student	Roll No.	Total (Out of 50)	Grade
1	Shraddha Pandurang Patil	251	41	O
2	Shweta Pavan Majgaonkar	252	33	A+
3	Shivani Subhash Swami	253	43	O
4	Siddhika Jahidahmad Bagwan	254	40	O
5	Alisha Jagannath Shinge	255	39	O
6	Ketaki Jaywant Sutar	256	42	O
7	Saipriya Srinivas Kampalapalli	257	44	O
8	Smita Jaysing Patil	258	40	O
9	Sumedh Subas Bhagwan	259	43	O
10	Dharmaraj Maruti Kamble	260	38	O
11	Aditi Shreedhar Gurav	261	43	O
12	Minakshi Chandrashekhar Sutar	262	40	O
13	Siddhi Satish Ghodake	263	46	O
14	Pratiksha Kerba Kamble	264	42	O
15	Ashwini Bajirao Barade	265	44	O
16	Shivani Sanjay Nikate	266	30	A+
17	Siddhi Milind Chavan	267	46	O
18	Shubhangi Sardar Survanshi	268	46	O
19	Samati Aannaso Khot	269	38	O
20	Rushikesh Bhagavat Powar	270	38	O
21	Rushikesh Balasaheb Kadam	271	41	O
22	Swapnil Sardar Shinde	272	36	O
23	Vinayak Shahaji Pachpund	273	42	O
24	Omkar Ramchandra Khot	274	36	O
25	Sainath Vijay Pore	275	34	A+
26	Suyag Sagar Upadhye	276	40	O
27	Rutvik Deepak Kore	277	41	O
28	Rushikesh Mallappa Kamble	278	33	A+
29	Shivani Ramdas Khandare	279	45	O
30	Anil Parshuram Baygol	280	41	O
31	Dhanajay Kiran Bavache	281	38	O
32	Sayali Sandeep Khabade	282	32	A+
33	Aashlesha Sanjay Nangnurkar	283	41	O
34	Suman Madhukar Gosavi	284	36	O
35	Mansi Satish Kale	285	32	A+
36	Inus Shagir Shaikh	286	28	A+
37	Pranoti Prakash Jadhav	287	42	O

H. Vasankar



H. Vasankar
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Shri Swami Vivekanand Shikshan Sanstha's

VIVEKANAND COLLEGE, KOLHAPUR. (Autonomous)

NAAC Reaccredited : "A" (CGPA 3.24), College with Potential for Excellence by U.G.C., New Delhi
"Star College" by D.B.T. Govt. of India, ISO: 9001-2015


CERTIFICATE

This is to certify that Suman Madhukar Gosavi

_____ of _____ has passed the Value Added Course in
'Medicinal Plants and their Conservation'

in the Month of March year 20 21..... The said certificate has been issued to
him/her at the Vivekanand College, Kolhapur.


Co-ordinator


Head
Department of Botany
Head
Department of Botany
Vivekanand College
Kolhapur


Principal
PRINCIPAL
Vivekanand College
Kolhapur