

Vivekanand College (An Empowered Autonomous), Kolhapur
Department of BCA

Notice

Date: 22/02/2025

All the students of BCA-II are hereby informed that there is **UNIT Test** of the subject **Data Structure using C++** on **25/02/2025** at **8.20 am-09.10 am**.

The test is of 20 Marks based on **UNIT-I**.

Attendance is compulsory to all.



A handwritten signature in black ink, appearing to read "V.B. Pujari".

(Mr. V.B. Pujari)

HOD

HEAD

DEPARTMENT OF B. C. A.
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(EMPOWERED AUTONOMOUS)

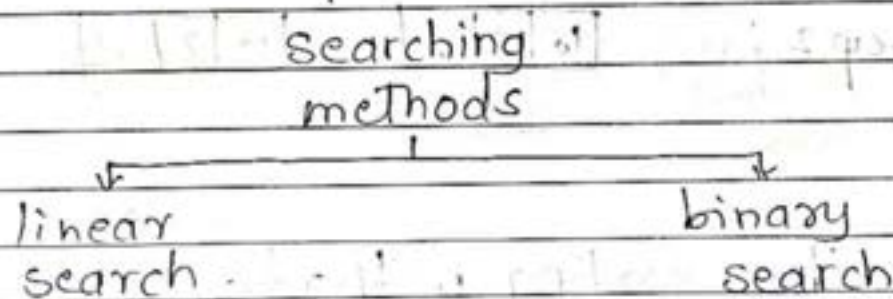


Q.1. Describe searching method and types with example.

→ Searching method:

Searching method in datastructure is used to find a particular record in an array.

There are 2 approaches to search in searching method -



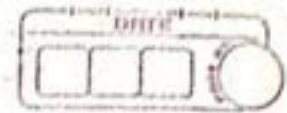
i) linear search

In linear search, The record is tried to find in a linear way. i.e by a particular sequence.

eg.

16	17	18	19	20	21
0	1	2	3	4	5

The every index is been looked upon linearly. Every index and elements are checked linearly to find the desired record.



ii) Binary search

Binary search use divide and conquer approach. Where a target element is set and using that targeted element, the record is found.

step 1:

16	17	18	19	20	26
----	----	----	----	----	----

 target = 18
 0 1 2 3 4 5

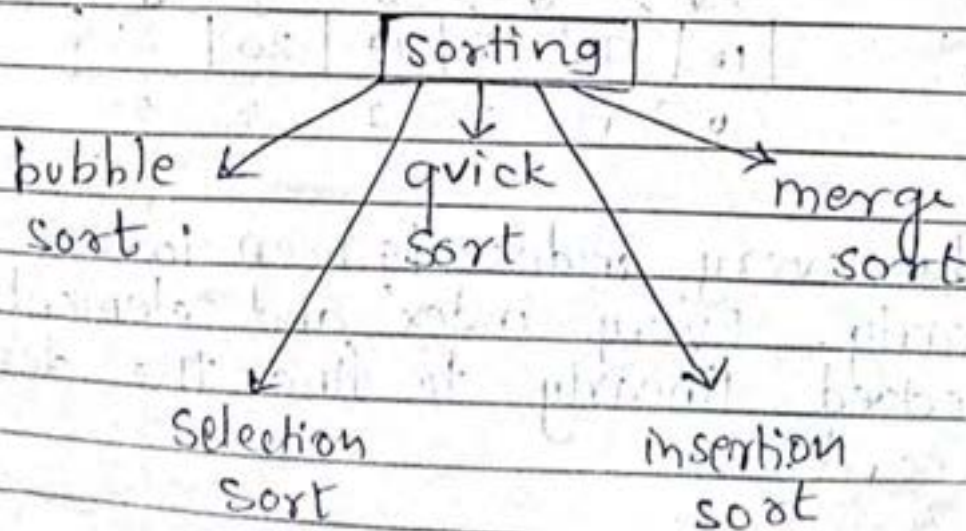
step 2:

16	17	18		19	20	21
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Q2 Describe sorting methods

Sorting methods are used to sort the elements in ascending or descending order.

There are basically 5 sorting methods namely -



i) Bubble sort :

In 'Bubble sort', the array elements are tried to sort in ascending or descending order.

In bubble sort, The adjacent element are compared and swaped.

eg.

7	16	24	3	50	17
---	----	----	---	----	----

 using bubble sort,

The arrays are kept in ascending like below

3	7	16	17	24	50
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ii) Insertion sort :

In insertion sort, some part of an array is considered sorted and a current variable is taken to sort. The remaining array and then add the right element in the space by comparing the element in current variable to their previous element and then swaped.

iii) Selection sort :

In selection sort, half part or some part of array is considered as sorted and the unsorted part is run on a loop to find the minimum of the elements and added one by one to the array and go on.

iv) Merge sort :

In merge sort, the divide & conquer technique is used and the elements in given array are sorted in a temporary array while stored.

sorting the small divided parts (elements) where $e = st = \text{same element}$. Then going reverse to binding together the elements in a sorted way.

v) Quick sort :

In quick sort, there is a pivot is considered and mostly the last element is considered as pivot and the left part of pivot is stored which are lower in value than the pivot and right side of pivot is sorted with keeping the bigger elements than pivot.

This way the lower small elements (sorted) pivot + (larger elements) make a sorted array in ascending order.

Q.3 stack - Uses LIFO (Last in first out) eg - dishes

- 1) Push () $\rightarrow$ adds the element
- 2) Pop () $\rightarrow$ deletes the element
- 3) push back $\rightarrow$ adds to the rear
- 4) push front $\rightarrow$ adds element to the front
- 5) pop-back $\rightarrow$ deletes from rear
- 6) pop-front $\rightarrow$ deleted from front
- 7) peek () $\rightarrow$ looks which element is in front.

Class : BCA II

Division : C

D.S.

Test 1

Sr. No.	Roll No.	Student Name	10/02/25	11/02/25	20/2	25/02	3/3	4/3
1	1411	MAI PARTI NILESH	Pran	Pran	Pran	Pran	Pran	AB
2	1412	*PRANJAL PRASHANT MALI	Pranjal	Pranjal	AB	Pranjal	Pranjal	Pranjal
3	1413	*SANJANA SANTOSH MANE	Sanjana	Sanjana	AB	Sanjana	AB	AB
4	1414	MANI MAHESH RAJARAM	AB	AB	AB	AB	AB	AB
5	1415	MANGAL RUGAVEL UTTAM	AB	AB	AB	AB	AB	AB
6	1416	MITHARI VRUSHAB DINESH	AB	AB	AB	AB	AB	AB
7	1417	*SHARVARI SATYAJIT MOHITE	AB	AB	AB	AB	AB	AB
8	1418	MOKASHI UJEF ABEDHUSEN	AB	AB	AB	AB	AB	AB
9	1419	MORE PRASAD PRAMOD	AB	AB	AB	AB	AB	AB
10	1420	PRIYANSHU NILESH MORE	AB	AB	AB	AB	AB	AB
11	1421	MUJAWAR AMAN TOHID	AB	AB	AB	AB	AB	AB
12	1422	*MUJAWAR AYESHA AKHTAR	AB	AB	AB	AB	AB	AB
13	1423	MUJAWAR MAHAMADJAIID SHAKIL	AB	AB	AB	AB	AB	AB
14	1424	*MUJAWAR MAHEK IRFAN	AB	AB	AB	AB	AB	AB
15	1425	MUKADAM AABSHAR MOHAMMAD ABDUL GANI	AB	AB	AB	AB	AB	AB
16	1426	HARSHAD DILIP NAIK	AB	AB	AB	AB	AB	AB
17	1427	NAIK SHREYASH BALU	AB	AB	AB	AB	AB	AB
18	1428	NAIKWADI ATHIRVA SACHIN	AB	AB	AB	AB	AB	AB
19	1429	NANDAVADEKAR SOHAM VINOD	AB	AB	AB	AB	AB	AB
20	1430	*RASIKA CHANDRAKANT NARAKE	AB	AB	AB	AB	AB	AB
21	1431	NASHTE ADITYA VIVEK	AB	AB	AB	AB	AB	AB
22	1432	NIKAM ADITYA TANAJI	AB	AB	AB	AB	AB	AB
23	1433	*PALANGE BHUMI SANGRAMSING	AB	AB	AB	AB	AB	AB
24	1434	*PANHALKAR SUHANA RAHIMATULLA	AB	AB	AB	AB	AB	AB
25	1435	PARMAJ ADITYA AMOL	AB	AB	AB	AB	AB	AB
26	1436	*PATEL MANSI SUBHASH	AB	AB	AB	AB	AB	AB
27	1437	*PATEL SHRUTI PARESH	AB	AB	AB	AB	AB	AB
28	1438	PATEL MOHAMMAD ABRAR BABASAHEB	AB	AB	AB	AB	AB	AB
29	1439	PATIL ABHIMANYU VIJAY	AB	AB	AB	AB	AB	AB
30	1440	PATIL ABHISHEK BALASO	AB	AB	AB	AB	AB	AB
31	1441	PATIL ADITYA MANISH	AB	AB	AB	AB	AB	AB
32	1442	*PATIL ALISHA RAVINDRA	AB	AB	AB	AB	AB	AB
33	1443	PATIL AMOL ASHOK	AB	AB	AB	AB	AB	AB
34	1444	PATIL ANIKET DHONDIBA	AB	AB	AB	AB	AB	AB
35	1445	*PATIL ASMITA UTTAM	AB	AB	AB	AB	AB	AB
36	1446	PATIL ATHARV CHETAN	AB	AB	AB	AB	AB	AB
37	1447	*PATIL DNYANESHWARI ANKUSHIRAO	AB	AB	AB	AB	AB	AB
38	1448	*PATIL HARSHADA CHANDRAKANT	AB	AB	AB	AB	AB	AB
39	1449	PATIL KUNDAN MAHESH	AB	AB	AB	AB	AB	AB
40	1450	PATIL MAHESH DNYANDEV	AB	AB	AB	AB	AB	AB
41	1451	*PATIL MANDIRA UTTAM	AB	AB	AB	AB	AB	AB
42	1452	*PATIL MINAKSHI PRAKASH	AB	AB	AB	AB	AB	AB
43	1453	PATIL PARAS PRAKASH	AB	AB	AB	AB	AB	AB
44	1454	*PATIL PAYAL ANANDA	AB	AB	AB	AB	AB	AB
45	1455	PATIL PREMRAJ SHIVAJI	AB	AB	AB	AB	AB	AB
46	1456	PATIL RUSHIKESH PARASGONDA	AB	AB	AB	AB	AB	AB
47	1457	*PATIL SAMIKSHA BANDOPANT	AB	AB	AB	AB	AB	AB
48	1458	*SAMIKSHA SADASHIV PATIL	AB	AB	AB	AB	AB	AB

Vivekanand College (An Empowered Autonomous), Kolhapur
Department of BCA

Notice

Date: 02/08/2025

All the students of BCA-III are hereby informed that there is **UNIT Test** of the subject **Computer Networks** on **05/08/2024** at **9.10 am-10.00 am**.

The test is of 20 Marks based on UNIT-I.

Attendance is compulsory to all.




(Mr. V.B. Pujari)

HOD

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Q1 Explain network architecture in detail:-

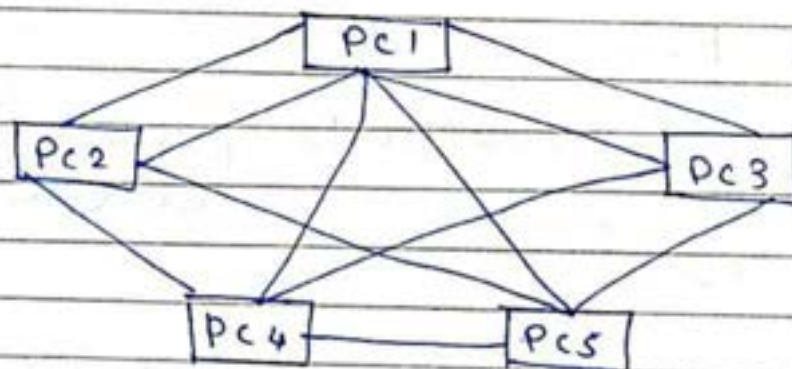
Computer network architecture is defined by the logical & physical designed of the software hardware protocols & media transmission of data. simply we can say that how computers are organized & how tasks are allocated to the computers.

There are two types of network architecture:-

1) Peer to peer network:-

2) client server network:-

1) Peer to Peer Network:-



Peer to peer network is a network in which all the computers are linked together & equal privileges & responsibilities.

Peer to peer network are useful for small environment usually up to the computers.

Peer to peer network has no dedicated server special permission are assigned to each computer for sharing the resources.

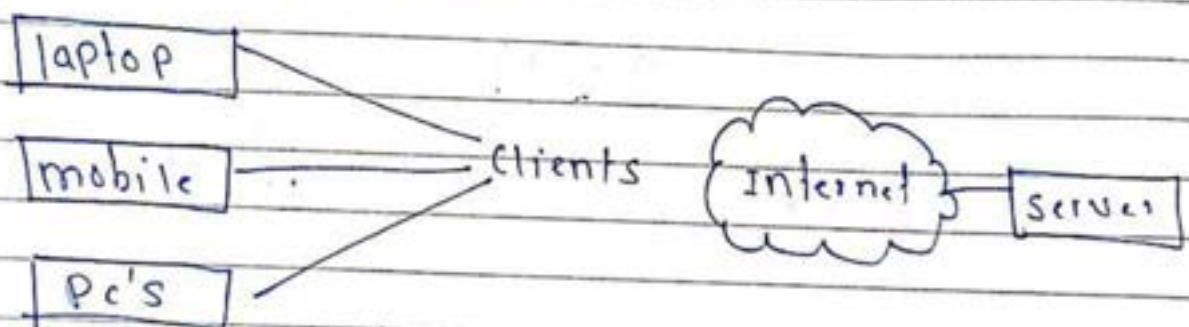
- Advantages:

- 1] It is less costly it has does not any dedicated Server.
- 2] It is easy to setup to maintain the computer will not stop working.

- Disadvantages:

- 1] In case peer to peer network does not contains centralized system.
- 2] It has security issues as devices it manages itself.

- 2] Client server Network:



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Client server network is a network model designed for the end users called clients to access the resources such as songs, videos, etc.

From central controller is an server. while all others computers in the network are called clients. A server performs all the measures operations such as security & network management.

- Advantages:

- 1] A client network server contains the centralized system. therefore we can backup the data easily.

2] Security is better in this network.

- Disadvantages:

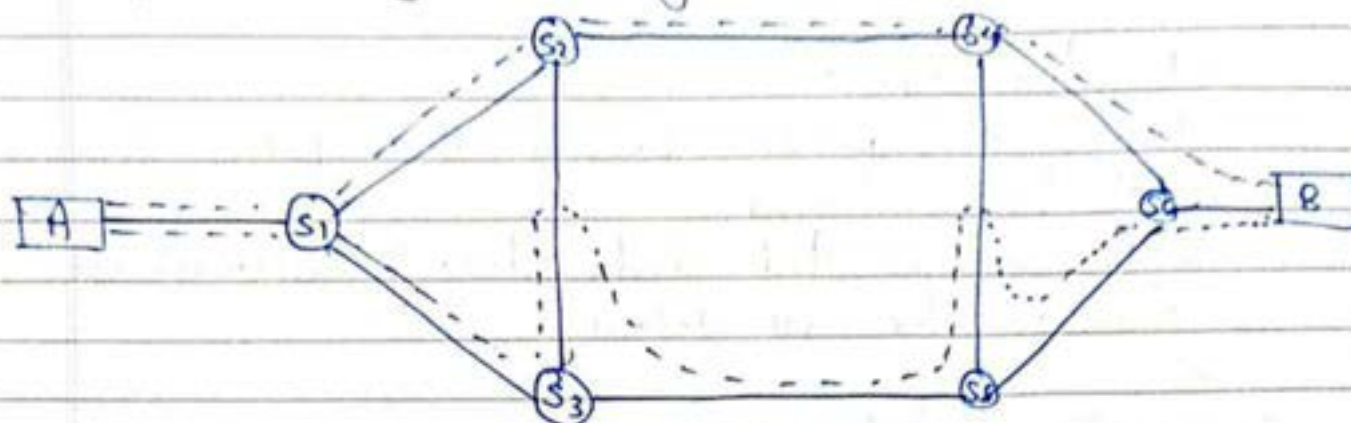
1] It is an expensive because it requires it server its huge memory.

2] It requires dedicated network administrator to manage the all resources.

Q2 Difference between:

Circuit switching	Packet switching
1] In this switching there are 3 phases. 1] Connection establishment 2] Data transfer 3] Connection released	1] In packet switching directly data pass transfer take place.
2] In delay between data units in circuit switching uniform	2] The data units in packet switching is not uniform
3] Circuit switching is more reliable	3] packet switching is less reliable.
4] It is not stored & forward techniques	4] It is stored & forward techniques.
5] Recording of packets is never possible.	5] Recording of packets possible.
6] call setup is required in circuit switching	6] no call setup is required in packet switching.

Q3 Explain message switching:



In the switching technique in which message is transfer as a complete unit. Routed through intermediate nodes at which is stored & forwarded. The destination address is appended to the message. message switching provides a dynamic routing.

Each & every nodes stored the entire message & then forwarded in to the next node. This type of N/w is known as stored & forward network.

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- Advantages:

- 1] Data Channels & shared among the Communication device.
- 2] message priority can be use to manage N/w

- Disadvantage:

- 1] The message switching must be equipped with sufficient storage to enable them.
- 2] The long delay can occur due to the storing and forwarding facility provided by the message switching technique.

Seat No	Name of the student	sign
1198	Blumen Palange	Blumen
1241	Swaranjali B. Patil	Patil
-	Namrata R. Patil	Patil
1202	Mansi Patel	Mansi Patel
1248	Minakshoo Patil.	Mip. Patil
1315	Pratiksha B. patil.	Patil.
1233	shradha K. Patil.	Patil
1239	Snehal. N. Patil	SNPatil
1234	shreya. s. patil	Patil
1230	Sanskriti. S. Patil	Patil
1213	Dnyaneshwari A. Patil	Patil
1177	Sanjana Santosh Mane.	Sanjana
1236	Shruti S. patil	Patil
1176	Pranjal. P. Mali	Pranjal
1193	Rajika. C. Narake	Rajika
1160	Ishwari V. Kundalkar	Ishwari
1163	Sanavi D. Kurohe	Sanavi
1180	Shravari Mahite	Shravari
1203	Shruti Patel	Patil
1237	shubham. m. patil	Patil
1183	Priyanshu. N. More	More
1232	Sarah Santosh patil	Patil
1216	Mahesh D. patil	Patil
1186	Jaid Mlyawar	Jaid
1188	AABSHAR MUKADAM	AABSHAR
1179	Vrushab Mithari	V.R.M.
1190	Shreyash Nark	Nark
1211	Atharv patil	Atharv
1429	Karun Kambale	Karun

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Department of BCA

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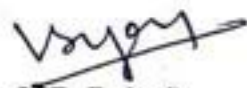
Date: 29/03/2025

All the students of BCA-I are hereby informed that there is **UNIT Test** of the subject **Object Oriented Programming using Java** on **03/04/2025** at **9.10 am-10.30 am**.

The test is of 30 Marks based on UNIT-I.

Attendance is compulsory to all.




(Mr. V.B. Pujari)

HOD

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Name :- Vaibhavi Umesh Bhurewar
Roll No. :- 21

classmate

Date _____
Page _____

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1. Explain basic concept of OOPs.
2. Distinguish betn Java, C & C++.
3. Define features of Java.
4. Short note -
 - 1) JVM
 - 2) Java and Internet
 - 3) Applications of OOPs.

Q1.

① Class :-

It In the Object - oriented Programming language the concept class is user-defined by blue-print or protocol to classify objects. Multiple objects can be included in class by def to define objects of same category.

Modifiers -

-types of modifiers

① Default - key access :-

Modifier which is formed by default keyword or by default is called default-key access.

② Private Access modifier :-

Modifiers which is formed by private keyword is called Private Access modifiers.

③ Protected Access modifier :-

Modifier which is formed by key protected is called protected Access modifier.

② Object -

In Object oriented programming the concept object

③ Polymorphism -

Polymorphism is the concept of Object Oriented programming that defines as 'poly' means 'many' & polymorphism means many-forms. Combining multiple programme is called polymorphism.

There are two methods of polymorphism:-

① Method Overloading - Method overloading is also known as compile-time polymorphism.

② Method Overriding - Method overriding is also known as run-time polymorphism.

④ Inheritance -

The concept inheritance in object oriented programming states that the code inherits

Superclass

Subclass : subclass inherits

Subclass

⑤ Abstraction -

Abstraction is a ~~pre~~ concept of object-oriented programming that shows only essential or useful information or parts to the users. Abstraction doesn't display non-essential part of that particular thing. Example as, You are accelerating your car you are only able to increase or decrease that accelerator or same to the brakes you applied while driving cars. You are able to only apply brakes But you don't know the inner function of this system or this mechanism is not displayed here. Abstraction is also same as this example. We just ^{see} the essential information or parts.

Q2.

• Origin

- C : It is originated from BPL, BPL.
- C++ : It is derived from C.
- Java : It is derived from C & C++.

• Platform dependency

- C : It is platform dependent language.
- C++ : It is also platform dependent language.
- Java : It is platform independent language.

• Sourcefile extension

- C : It has .c sourcefile extension.
- C++ : It has .cpp sourcefile extension.
- Java : It has .java sourcefile extension.

Q4. _____

1) JVM - Java Virtual Machine (JVM) is based on JDK (Java Development Kit)

2) Applications of OOPs.

1) Game development:- Object oriented programming is ^{mostly} used in game development. It helps to develop games because of high network feature.

2) Software development :- Software development should also done by application of object oriented programming.

3) Security management :- OOPs also helps in security.

Q2. _____

→ Dynamic and static.

-C: It is static

-C++: It is also static

-Java: It is Dynamic language.



"Education for knowledge, Science, and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

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

(An Empowered Autonomous Institute)



Department of BCA

Notice

Date: 11/02/2026

All the students of **BCA-II (Division B And C)** are hereby informed that there is **Unit Test 1** of the subject **Artificial Intelligence** on **14/02/2026** at 09:00 am to 10:00 am.

The test is of 25 marks based on UNIT 1. Attendance is compulsory to all.




(Mr. V.B. Pujari)

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Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

BCA II Sem IV

Question Paper of Unit Test 1

Subject: Artificial Intelligence

Marks: 25

Time: 09:00 am to 10: 00 am

Date: 14/02/2026

Q1. What is Artificial Intelligence? Explain the structure of an intelligent agent with its main components. [5]

Q2. Explain a Knowledge based agent in AI and describes its working and main components with suitable example . [5]

Q3. Explain Wumpus world as an example of knowledge based Environment. [5]

Q4. Explain problem solving agent in AI. [5]

Q5. Explain nature of Environment of AI. Discuss different type of Environment. [5]



Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Attendance Sheet of Unit Test 1

Subject: Artificial Intelligence

Date: 14/02/2026

Sr. No	Name	Sign
1.	Jiya A. Jamadar	<u>J. Jamadar</u>
2.	Prachi D. Karpe	<u>P. Karpe</u>
3.	Krutika Ramchandra Koli	<u>B. Koli</u>
4.	Rukhsar. Gadik Kachhi	<u>R. Kachhi</u>
5.	Madhura Vaibhav Kulkarni.	<u>M. Kulkarni</u>
6.	Anisha Devdas Pandore	<u>A.D. Pandore</u>
7.	vedika Sambhaji Killedar.	<u>V. Killedar</u>
8.	Snushti Shantinath Magdum	<u>S.S. Magdum</u>
9.	Praneeti Prashant Kamble	<u>P. Kamble</u>
10.	Pranima Tukaram Kamble	<u>P. Kamble</u>
11]	Pratiksha Ashok Naykwadi	<u>P. Naykwadi</u>
12>	Ankita Anil Nulle	<u>A. Nulle</u>
13)	Shruti Namdev Mali	<u>S. Mali</u>
14)	Pallavi Vilas Mhavale	<u>P. Mhavale</u>
15)	Dhruv. Chandresh. Mehta	<u>D. Mehta</u>
16)	Omsai Sanjay Mali	<u>O. Mali</u>
17)	Premkumar Rajaram Khandekar	<u>P. Khandekar</u>
18]	Aniket Sunil Zambhule.	<u>A. Zambhule</u>
19]	Chattanya Sanjay Peau	<u>C. Peau</u>
20]	Pritam C. Mengane	<u>P. Mengane</u>
21]	Shrikant Bhaicu Kumbhar	<u>S. Kumbhar</u>
22]	Amit .N. Kamble.	<u>A. Kamble</u>
23)	Aman. R. Nayakwadi	<u>A. Nayakwadi</u>
24]	Prathmesh. E. Lagare	<u>P. Lagare</u>

Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Marks Sheet of Unit Test 1

Subject: Artificial Intelligence

Date: 14/02/2026

Sr. No	Name	Marks
1.	Jiya A. Jamadar	15
2.	Prachi D. Karpe.	12
3	Krutika Ramchandra Koli	16
4	Rukhsar Gadik Kachhi	15
5.	Madhura Vaibhav Kulkarni.	17
6.	Anisha Devdas Pandore	20
7.	Vedika Sambhaji Killedar.	17
8.	Srushti Shantinath Magdum	10
9.	Praneeti Prashant Komble	12
10.	Ankita Anil Nulle	15
11.]	Pratibha Ashok Nayakwadi	16
12	Poornima Tukaram Kamble	18
13]	Aniket Sunil Tambhule.	18
14]	Premkumar R. Khandekar.	23
15)	Dhruv. Chandresh. Mehta	20
16]	Omsai Sanjay Mali	17
17]	Chaitanya Sanjay Pawar	13
18]	Pritam C. Mengane	10
19]	Shrikant. B. Kumbhar	14
20]	Amit. N. Kamble.	13
21)	Raman. R. Nayakwadi	11
22]	Prathmesh. E. Lagare.	18
23)	Shruti Namdev Mali	15
24)	Pallavi Vilas Mhavale	15

Vivekanand College (An Empowered Autonomous), Kolhapur.
Department of BCA
Subject: Artificial Intelligence
BCA II Sem IV
Test Photos

Time : 09:00 am to 10:00 am

Date : 14/02/2026



- Vedika Sambhaji Killedar
- 14 Feb 2026
- 'B'

Unit 7

14
25

Page No.:
Date: / /

- Q1. What is Artificial intelligence? Explain the structure of an intelligent agent with its main components.
2. Explain knowledge-based agent in AI and describe its working and main components with an example.
3. Explain the Wumpus world as an example of a knowledge-based environment.
4. Explain problem-solving agent in AI.
5. Explain the nature of environment in AI, which describes different types of environment.

3) → Wumpus world

- It is an example of a knowledge-based agent.
- It is a game to achieve the goal of finding the (gold) treasure safely and returning to the start.
- The game is on a 4x4 grid, and the agent starts at (1,1).
- There are some harmful elements: pits and Wumpuses. Pits are near to 'Breeze', and Wumpuses are near to the 'Stench'.
- The agent's goal is to find the treasure and return safely.
- The goal of the Wumpus world is to safely reach the goal, get the gold, and return safely.

- Q1. What is AI? Explain the structure of an intelligent agent with its main components?
- Q2. Explain 'knowledge based agent in AI? & describe its working and main component with suitable example?
- Q3. Explain wumpus world as an example of knowledge based environment?
- Q4. Explain problem solving agent in AI?
- Q5. Explain nature of environment of AI. Discuss different type of environment?

Q1.

→

The AI is a branch of computer science that focus on the marketing computer & machine intelligents it unable to think learn more that data & makes can solve problems in understand human language.

∴ The structure of an intelligent agents is follow

1) Sensor - Sensor is the ear & eyes. what it uses to perceive the environment depending on the system.

1) camera in robot

2) microphone in voice system

2) Actuators - These are the part that let the agent act in physical system they could be motors, gears & mechanical part in software.

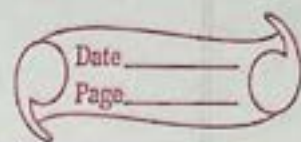
Name: Shruti Namdev Mali

Std: BCA SY Div: B

Time: 9.00 - 10.00

Date: 14/02/2026

15
25



Test No - 1

Q.1. Artificial intelligence is a computer science that focuses on making computers and machine intelligents. It is a machine to think, learn from data and make decisions to human.

There are four main components of structure of an intelligent agent.

There are included in sensors, accurators, percept sequence and

i) Sensors - The sensor is a included in ear and eye. they are found a agent. This agent eyes and ears what it uses throw percieve the sequencely.

ii) accurators - The accurators is a most important component of a Artificial intelligence. the accurators is a working after the sensors. the accurators is a think to learn from the data in a accurators in a structure of agent. the accurators is a important in structure of an agent.

- Q1] what is artificial intelligence. Explain the structure of AI with its main components.
- Q2] Explain knowledge based agent in AI & describe its working & main components with suitable example.
- Q3] Explain Wumpus world as an example of knowledge-based environment.
- Q4] Explain problem solving agent in AI.
- Q5] Explain Nature of environment in AI. Different types of environment. Discuss.

Q1].

→

Artificial intelligence is a branch of computer science that works with the working of machines.

AI helps machines think like humans, work like humans & perform the functions. It enables machines to think and make decisions like humans.

• components & structure of AI.

Sensors :

Sensors in AI works like the human senses. Sensors can be in any form. Biometric, face authentication & finger prints. It works or processes on data or information of environment.

Name:- Srushti Shantinath Magdum Time: 9 to 10

Std:- BCA 54.

div:- B

Unit Test 1.

10

25

D	M	M	Y	Y	Y	Y			

1. what is Artificial agent? explain structure of an intelligent agent with its main components.
2. explain knowledge based agent in AI and describe its working and main components with suitable example.
3. explain wumpus world as an example of knowledge based environment.
4. explain problem solving in AI.
5. explain nature of AI environment of AI discuss different types of environment.

Q1 What is AI? Explain Structure of AI?

Q3 Explain KBA in AI and Explain its working and main components with example?

Q4 Explain Wumpus World as an eg of knowledge based environment.

Q2 Explain Problem solving agent in AI?

Q5 Explain Nature of Environment of AI discuss different type of environment?

Q1
→

• Structure of AI

• Structure of agent in AI is a foundation of how it works, its not just what agent does but all about the processes.

• Sensors :- This are the agents eyes and ears, this uses the perceive environment depending on system, sensors could be
i) cameras in robot
ii) microphones in voice assistance
iii) Temperature detector in smart thermostat.



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Department of BCA

Notice

Date: 08/10/2025

All the students of **BCA-III (Division A)** are hereby informed that there is **Unit Test 2** of the subject **ASP. NET** on **10/10/2025** at 10:00 am to 10:45 am.

The test is of 20 marks based on UNIT 2. Attendance is compulsory to all.



(Mr. V.B.Pujari)

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DEPARTMENT OF B. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Subject: ASP .NET

Question Paper of Unit Test 2

Marks: 20

Time : 10:00 am to 10:45 am

Date : 10/10/2025

Q1) What is Polymorphism? Explain Types of Polymorphism. [7]

Q2) Explain Inheritance with its types. [7]

Q3) Write a Short Note on (Any 3) [6]

1) Abstract Class

2) Pass by value

3) Partial Class

4) Sealed Class



Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Attendance Sheet of Unit Test 2

Subject: ASP.NET

Date: 10/10/25

Sr. No	Name	Sign
1	Saniya D. Gadivaddar	
2	Simran D. Bhatnari	
3	Madhili M. Adnalk	
4	Nirjara Y. Chougule	
5	Archita A. Chavan	
6	Neha S. Gurav	
7	Harshada D. Ghatage	
8	Shravani M. Dafalpure	
9	Ankita K. Desai	
10	Pradnya B. Gaikwad	
11	Diksha S. Chavan	
12	Ankita G. Chopale	
13	Aatmaja H. Amate	
14	Deeya A. Bhatia	
15	Irma M. Altar	
16	Sahil S. Chougale	
17	Karan K. Chougale	
18	Swarup S. Atigae	
19	Soham S. Atigae	
20	Attaru N. Bhosale	
21	Gourav S. Chandane	
22	Tamash A. Despuje	
23	Jayankur A. Chougale	
24	Karan A. Chougale	
25	Hardik B. Ghatage	
26	Hyder S. Desai	
27	Attaru D. Arpatkar	
28	Abhishek S. Chougale	



Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Marks Sheet of Unit Test 2

Subject: ASP.NET

Date: 10/10/25

Sr. No	Name	Marks
1	Saniya D. Gadivaddar	15
2	Simran D. Bhataji	13
3	Marthili M. Adnalk	11
4)	Nirjara Y. Chougule	13
5)	Archita A. Chavan	12
6)	Neha S. Gurav	11
7)	Harshada D. Ghatage	13
8)	Shravani M. Dafalpure	14
9)	Ankita K. Desai	12
10)	Pradnya B. Gaikwad	16
11	Diksha S. Chavan	14
12	Ankita A. Chopade	11
13	Atmaja H. Amate	13
14	Deeya A. Bhatia	16
15	Insha M. Altar	13
16.	Sahil S. Chougale	13
17.	Harshik D. Ghatage	15
18	Shruti D. Holwai	17
19	Soham S. Atigbe	14
20.	Dipak R. Hande	13
21)	Akash B. Chougale	12
22)	Atkar N. Bhosale	16
23)	Ankur D. Atiyekar	13
24	Rohit R. Chougule	15
25)	Karan K. Chougale	13



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Department of BCA
Subject: ASP .NET
Test Photos

Time : 10:00 am to 10:45 am

Date : 10/10/2025



Q1] What is Polymorphism? Explain types of Polymorphism.

→ - Polymorphism in C# means "many forms". It allows methods to do different things based on the objects that is calling them.

(One name but multiple functionality)

- C# polymorphism is a key concept in OOPs that allows methods, properties or properties to take multiple forms.

- The term "polymorphism" means "many forms"; it enables a single interface to be used for different datatypes by improving code flexibility and reusability.

- Polymorphism is achieved by through method overloading and it allows objects to be treated as instances of their base class.

- This ~~etc~~ enhances scalability and maintainability in C#.

- Types of Polymorphism:

① Compile-time Polymorphism:

- In compile-time polymorphism;

① compile-time polymorphism is also called as static polymorphism.

② It is implemented using ~~need~~ method overloading.

③ It allows a class to have multiple methods with the same name but different signatures.

④ It can be differentiated based on below performance:

(a) Method to call is decided at compile time.

(b) changing order of parameters.

(c) changing datatype of parameters.

(d) changing no. of parameters.

Name : Nirjara Yogesh Chougule

Div : A

Std : BCA III

Q 1 What is polymorphism? Explain Types of polymorphism.

→ Introduction to polymorphism:

- C# polymorphism is a key concept in object oriented programming (oop) that allows methods properties or operators to take many forms;
- The term "polymorphism means" many forms", it enable a single interface to be used for different data types by improving code flexibility and Resability.
- This enhances maintainability and Scalability in C# application.

Type of Polymorphism

Compile Time Polymorphism

Run Time Polymorphism

1) Compile time polymorphism :-

(Method overloading / Static polymorphisms):

- Compile time polymorphism, also called static polymorphism, is implemented using method overloading.

2025

ASP.NET

Q1. What is polymorphism? Explain its type.

Ans:- Polymorphism means "many forms". It allows methods to do different things based on the object that is calling them.

C# polymorphism is a key concept in OOP that allows methods or properties on multiple forms. The multiple forms enables it single form to be used on different datatype. Polymorphism is achieved due to method overloading & method overriding & it allows object to be treated as instances of base class.

* Types of polymorphism:-

- There are 2 types - Runtime polymorphism
Compile time polymorphism

01. Compiletime polymorphism:- (method overloading)

In this type of polymorphism is also called as the static polymorphism. It is implemented using method overloading. It allows class to have multiple methods with same name but different signatures.

(parameters)

- Different by changing the no. parameters.
- Different by changing the datatype.
- Different by changing the order of parameter.
- The method to call is decided in compile time.

eg:- public class Calculator

```
public int Add (int a, int b)
```

```
{
    return a+b;
}
```

Q.1 What is Polymorphism? Explain Types of Polymorphism.

- Polymorphism is one of the four pillars of object-oriented programming.
- In C#, it allows a single interface to represent different implementation.
- The word polymorphism means "many forms".
- The class in the polymorphism

Types of Polymorphism.

There are two types of polymorphism:

- a) Compile time polymorphism
- b) Runtime Polymorphism

1) Compile Time Polymorphism :-

- It is achieved by method overloading or operator overloading. The method to be executed is determined at compile time.

• Method overloading :-

Multiple methods in the same class but different parameters is known as method overloading. The correct method is selected by the compiler based on the arguments provided.

• Operator Overloading :-

Operator overloading in C# allows redefining the behaviour of operators for user-defined types. It allows enables operators to perform custom operations when applied to object of class or struct.

ASP.NET Test

What is polymorphism? Explain types of polymorphism?

Ans - Polymorphism means - many forms

- It allows methods to do different based on the object that is calling them.
- C# Polymorphism is a key concept in object oriented programming (OOP) that allows methods, properties or operator to take multiple forms.
- Polymorphism is achieved through method overloading and overriding.
- The following are the types of polymorphism:
 - 1) Compile Time polymorphism
 - 2) Run-time polymorphism

① Compile Time Polymorphism :-

- Compile Time Polymorphism is also called static polymorphism.

- Compile time polymorphism is the method overloading.

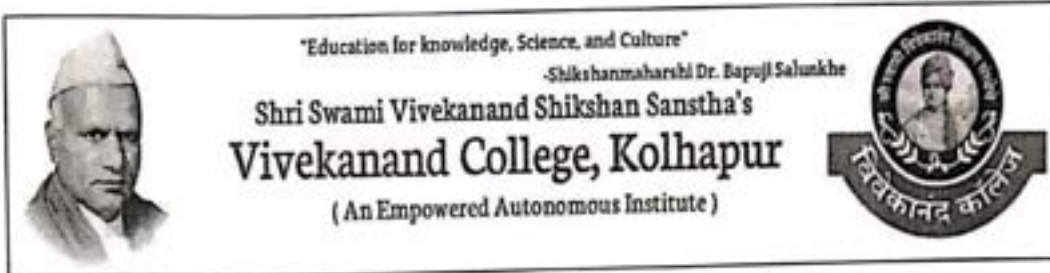
- It allows class to implement have multiple methods with the same name but different parameters list.

- Syntax :-

```
public class calculator
```

```
{  
    public int Add (int a, int b)
```

```
{  
    return a+b;
```



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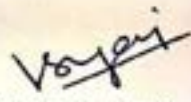
NOTICE

Date: 11/02/2026

All the students of BCA-III Div B are here by informed that, there is Unit Test -I of the subject Java Programming on 13/02/2026 at 8:00 to 9:00AM. The test is of marks 20.

Test will be conducted on Unit-I

Attendance is compulsory to all.


Mr. V. B. Pujari
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Unit Test-1

Subject: Java Programming

Total Marks:20

Attempt any 4 Questions each Question 5 marks

Q.1)What is mean by java ?Explain features Java?

Q.2)What is mean by inheritance? Explain its types?

Q.3)Define the polymorphism ?explain method overloading and method overriding with example?

Q.4)What is mean by java packages? Define and importing the packages?

Q.5)What is Type casting? Explain its types with example?

Q.6)Explain interface in java with example?

Subject: - Java Programming (Unit Test-I)

Class: -BCA-III (Sem. VI)

Division: -B

Sr.No.	Full Name	Sign
1	Ankita Bagar kadam	<u>Ankita</u>
2	Sandya vittal kamble	<u>Sandya</u>
3	Sonali vittal kamble	<u>Sonali</u>
4	Samruddhi Yuvraj kumbhar	<u>Samruddhi</u>
5	Arya Sunil Jadhav	<u>Arya</u>
6	Sneha Tukaram kamble	<u>Sneha</u>
7	Simran Sikandas Tamadas	<u>Simran</u>
8	Rutuja Ganesh Maigokar	<u>Rutuja</u>
9	Sakshi Maruti Jadhav	<u>Sakshi</u>
10	Shreya Prakash Jadhav	<u>Shreya</u>
11	Diksha Manoj kolekar	<u>Diksha</u>
12	Amruta Sunil kamat	<u>Amruta</u>
13	Tanvi Nilesh Jamsandekar	<u>Tanvi</u>
14	Vaibhavi Vinod Jamsandekar	<u>Vaibhavi</u>
15	Vaishnavi Ravindra kamble	<u>Vaishnavi</u>
16	Nikita Vikas kamble	<u>Nikita</u>
17	Siddhi kishor kakde	<u>Siddhi</u>
18	chkhuta Nitin kadam	<u>chkhuta</u>
19	Apurva Gurusprasad kumbhar	<u>Apurva</u>
20	Devendra Rajesh kamble	<u>Devendra</u>
21	Aditya Adinath kumbhar	<u>Aditya</u>
22	Abhishek Arjun kachre	<u>Abhishek</u>
23	Jay Santosh Jadhav	<u>Jay</u>
24	Rohan Ishaan kamble	<u>Rohan</u>
25	Pranav Sandesh khogade	<u>Pranav</u>
26	Abhijeet Pandit khade	<u>Abhijeet</u>
27	Rajendran umesh kate	<u>Rajendran</u>
28	Pranav Shankar kumbhar	<u>Pranav</u>
29	Atharv Digambar Hypare	<u>Atharv</u>
30	Shivraj Kamalakar khatange	<u>Shivraj</u>
31	Tejas Hindurao kamble	<u>Tejas</u>
32		
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35		
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39		

ame - Aanya Sunil Jadhav.
ID - B Roll.No :- 1675 class :- BCA-TY
sub - JAVA.

classmate
Date _____
Page _____

Q1. What is mean by JAVA? Explain Features of JAVA.

20 - JAVA is class based programming language.

- JAVA supports OOP (Object oriented programming) concepts.

- JAVA is High performance programming language.

- JAVA is platform independent.

means we can perform java program on any operating system.

- JAVA is portable means we can easily switch operating system.

- JAVA is founded by Sun Microsystems in 1991.

But actually successfully performed in 1995.

- JAVA increase reusability of code.

- JAVA supports OOP concepts like Inheritance, Polymorphism, Encapsulation, Abstraction etc.

• Features of JAVA

1) Class based programming language.

- Without class and object we can not perform java programs.

special garbage collection, security etc. are features that make Java a robust

2) High level

- JAVA is high level programming language, we can run it on any OS.

3) Portable

- JAVA is portable, we can easily switch operating system.

4) Platform Independent

- JAVA is platform independent. we can perform java programs and run them on any operating system.

5) Object oriented

- JAVA is object oriented programming language which supports multiple OOP concepts. like Inheritance, Polymorphism etc.

Q5. JAVA Package.

- JAVA Package is collection of classes / interfaces.
- It is same as / Folder of windows.
- Package combines several classes & interfaces together.
- It is declared by package keyword.
- It is accessed by import keyword.
- There are two types of packages in JAVA.
 - 1) User defined Packages.
 - 2) Built in Packages.

• Built in packages.

- The packages which are already defined and whose meaning is already known by compiler. is known as built in packages.

Example:-

JAVA.Util.* - Contains utilities

JAVA.io - Contains input output operation.

java.awt - Contains GUI component

java.lang - Contains java component

- User defined packages -
- The packages that are defined by user are called user define packages.
- It is defined by package keyword.
- We can store multiple classes and interfaces in package.

• Syntax - `package package_name;`

• Example:-

```
1) package math;
   public class addition
   {
       public int add(int a, int b)
       {
           return a + b;
       }
   }
```

```
2) import math.addition;
   class Main
   {
       public static void main (String[] args)
       {
           addition a = new addition();
           int res = a.add(10, 20);
           System.out.println("Addition = " + res);
       }
   }
```

Q3 Type casting.

- Type casting means converting a data from one data type to another data type.

- means converting int into double.

- Type casting also known as type conversion.

- There are two types of type casting.

1) Implicit Type casting

2) Explicit Type casting.

1) Implicit Type casting.

- Implicit Type casting means automatic type casting.

- It converts smaller datatype into larger datatype automatically.

- It is also known as automatic type conversion.

```
class A
```

```
{
```

```
    public static void main (String[] args)
    {
```

```
        int a = 10;
```

```
        double b = a;
```

```
        System.out.println (b);
```

```
    }
```

```
}
```

O/P :- 10.

2) Explicit Type casting.

- We have to do explicit type casting manually.

- Explicit type casting means converting a larger datatype into a smaller datatype.

- It is also called manual type conversion.

means converting double into

Examp int.

Example -

```
class B
```

```
{
```

```
    public static void main ( )
```

```
{
```

```
    double a = 10.5;
```

```
    int b = (int) a;
```

```
    System.out.println (b);
```

```
}
```

```
}
```

O/P - 10.

A 22010

}

Q6

- Poly morphism**
- Polymorphism means ability of taking many forms.
 - It allows method to be declare with same name with multiple methods of same name in one class.
 - It is very important concept of OOP's.
 - Polymorphism is achieved in following ways -
 - 1) Compile-time Polymorphism
 - 2) Runtime Polymorphism.

1) Compile time polymorphism.

- It is also called static polymorphism.
- It contains method overloading.

• Method overloading

Method overloading means one class contains multiple methods having same name but different parameters.

• Example -

```
class A {
```

```
    public int add (int a, int b)
```

```
    {
```

```
        return a + b;
```

```
    }
```

```
    System.out.println
```

```

    public int add (double 'A', double
    {
        return a + b;
    }
}

class demo
{
    public static void main ()
    {
        A a = new A ();
        int p = a.add (10, 20);
        System.out.println ("sum =", +p);
        int q = a.add (10.5, 11.6);
        System.out.println ("sum =", +q);
    }
}

```

• Runtime Polymorphism

• Runtime polymorphism means dynamic polymorphism

- It is achieved by method overriding

- And this process is ~~all~~ done at runtime.

• Method overriding

Method overriding means method with same name and same parameters is ~~ex~~ overridden in extended class. A

• Example:-

class A

{

public void show (~~int a~~){ int a = 10; ~~a = 10~~~~System.out.println(a);~~

{ System.out.println(a);

}

class B extends A

{

@ override

int show () ~~{ int a = 10;~~

{

~~int~~

super.show();

}

}

class demo

{

public static void main ()

{

B b = new B ();

b.show ();

}

{.

1) It is a high level programming language based on object-oriented programming.

① Java is a high level programming language that is based on OOP (Object Oriented Programming).

② Java is simple with its syntax and easy to learn.

③ Java is pure object oriented programming language and it is a class based programming language.

④ Java is widely used robust and reliable programming language.

* Features of Java:

① Simple: Java is simple to learn & straightforward with its syntax. Java does not use any complex features such as pointer, multiple inheritance.

② Platform Independent: Java is a platform independent. First code is compiled, then converted into bytecode with help of JVM (Java Virtual Machine). It can run program on any machine which have JVM installed onto it.

③ Secure: Java does not use pointer unlike other programming language which may lead to data leakage. It uses special garbage collection memory for that.

④ Robust: Java is a widely used language which consists of so many features. Efficient memory management, no direct access to other memory, special garbage collection, security are the key features that make Java a robust programming language to rely on.

Q.1) Java is object oriented programming language. It is known for its WORA feature that is "write once, run anywhere". It was developed by James Gosling in Sun Microsystem.

Features of Java :-

1. Simple

Java's syntax is easy to understand. It is a simple language.

2. Object oriented

Java is an object oriented language, it supports objects, classes, encapsulation, inheritance & polymorphism.

3. Platform independent

We can write its code and run it anywhere.

4. Portable

We can switch operating system anytime while programming.

5. Secure

Java is very secure as it prevents data leakage & memory leakage.

6. High performance

We can compile it once and run anytime.

→ Introduction

- Java is object oriented programming language.
- Java is class based programming language.
- Java uses JVM compiler to compile the program.
- Java is easy to learn and user friendly language.

* Features of Java:

① Object oriented

Java language is specifically a object and class based programming language.

② Platform Independence

The famous "feature" of java "write once and use anywhere". We can run java code in any operating system which have JDK installed.

③ Robust

Java is very secure and reliable programming language. Java provides much security to the user.

④ class-based

Java programming language is class based programming language. we must declare a class in Java code.

⑤ Interpreted

Java is high level interpreted language. it uses javac compiler to compile code.

⑥ Distributed

Q1 What is mean by Java & explain Features of Java.

- Java is a class based programming language
- Java is a high level programming language
- Java is a platform independent programming language.

* Feature :

- ① Object oriented
- ② Platform independent
- ③ Secure
- ④ Simple
- ⑤ High performance
- ⑥ Portable

① Object oriented :

- Java is a object oriented programming language.

② Platform independent :

- Java is a platform independent language
- Java language is use any Operating System.

③ Secure :

- Java language is secure compare to other programming language.

④ Simple :

- Java is a Simple language. to understand easily.

⑤ High Performance:

- Java language is high performance programming language.



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-Shikshanmaharshi Dr. Bapuji Salunkhe

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Vivekanand College, Kolhapur**

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Department of BCA

Notice

Date: 11/02/2026

All the students of **BCA-II (Division B And C)** are hereby informed that there is **Unit Test 1** of the subject **Artificial Intelligence** on **14/02/2026** at 09:00 am to 10:00 am.

The test is of 25 marks based on UNIT 1. Attendance is compulsory to all.




(Mr. V.B.Pujari)

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Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

BCA II Sem IV

Question Paper of Unit Test 1

Subject: Artificial Intelligence

Marks: 25

Time: 09:00 am to 10: 00 am

Date: 14/02/2026

Q1. What is Artificial Intelligence? Explain the structure of an intelligent agent with its main components. [5]

Q2. Explain a Knowledge based agent in AI and describes its working and main components with suitable example . [5]

Q3. Explain Wumpus world as an example of knowledge based Environment. [5]

Q4. Explain problem solving agent in AI. [5]

Q5. Explain nature of Environment of AI. Discuss different type of Environment. [5]



Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Attendance Sheet of Unit Test 1

Subject: Artificial Intelligence

Date: 14/02/2026

Sr. No	Name	Sign
1.	Jiya A. Jamadar	<u>J. Jamadar</u>
2.	Prachi D. Karpe	<u>P. Karpe</u>
3.	Krutika Ramchandra Koli	<u>B. Koli</u>
4.	Rukhsar. Gadik Kachhi	<u>R. Kachhi</u>
5.	Madhura Vaibhav Kulkarni.	<u>M. Kulkarni</u>
6.	Anisha Devdas Pandore	<u>A.D. Pandore</u>
7.	vedika Sambhaji Killedar.	<u>V. Killedar</u>
8.	Snushti Shantinath Magdum	<u>S.S. Magdum</u>
9.	Praneeti Prashant Kamble	<u>P. Kamble</u>
10.	Pranima Tukaram Kamble	<u>P. Kamble</u>
11]	Pratiksha Ashok Naykwadi	<u>P. Naykwadi</u>
12>	Ankita Anil Nulle	<u>A. Nulle</u>
13)	Shruti Namdev Mali	<u>S. Mali</u>
14)	Pallavi Vilas Mhavale	<u>P. Mhavale</u>
15)	Dhruv. Chandresh. Mehta	<u>D. Mehta</u>
16)	Omsai Sanjay Mali	<u>O. Mali</u>
17)	Premkumar Rajaram Khandekar	<u>P. Khandekar</u>
18]	Aniket Sunil Zambhule.	<u>A. Zambhule</u>
19]	Chaitanya Sanjay Peaw	<u>C. Peaw</u>
20]	Pritam C. Mengane	<u>P. Mengane</u>
21]	Shrikant Bhaicu Kumbhar	<u>S. Kumbhar</u>
22]	Amit .N. Kamble.	<u>A. Kamble</u>
23)	Aman. R. Nayakwadi	<u>A. Nayakwadi</u>
24]	Prathmesh. E. Lagare	<u>P. Lagare</u>

Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Marks Sheet of Unit Test 1

Subject: Artificial Intelligence

Date: 14/02/2026

Sr. No	Name	Marks
1.	Jiya A. Jamadar	15
2.	Prachi D. Karpe.	12
3	Krutika Ramchandra Koli	16
4	Rukhsar Gadik Kachhi	15
5.	Madhura Vaibhav Kulkarni.	17
6.	Anisha Devdas Pandore	20
7.	Vedika Sambhaji Killedar.	17
8.	Srushti Shantinath Magdum	10
9.	Praneeti Prashant Komble	12
10.	Ankita Anil Nulle	15
11.]	Pratibha Ashok Nayakwadi	16
12	Poornima Tukaram Kamble	18
13]	Aniket Sunil Tambhule.	18
14]	Premkumar R. Khandekar.	23
15)	Dhruv. Chandresh. Mehta	20
16]	Omsai Sanjay Mali	17
17]	Chaitanya Sanjay Pawar	13
18]	Pritam C. Mengane	10
19]	Shrikant. B. Kumbhar	14
20]	Amit. N. Kamble.	13
21)	Raman. R. Nayakwadi	11
22]	Prathmesh. E. Lagare.	18
23)	Shruti Namdev Mali	15
24)	Pallavi Vilas Mhavale	15

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Department of BCA
Subject: Artificial Intelligence
BCA II Sem IV
Test Photos

Time : 09:00 am to 10:00 am

Date : 14/02/2026



- Vedika Sambhaji Killedar
- 14 Feb 2026
- 'B'

Unit 7

14
25

Page No.:
Date: / /

- Q1. What is Artificial intelligence? Explain the structure of an intelligent agent with its main components.
2. Explain knowledge-based agent in AI and describe its working and main components with an example.
3. Explain the Wumpus world as an example of a knowledge-based environment.
4. Explain problem-solving agent in AI.
5. Explain the nature of environment in AI, which describes different types of environment.

3) → Wumpus world

- It is an example of a knowledge-based agent.
- It is a game to achieve the goal of finding the (gold) treasure safely and getting out.
- The game is on a 4x4 grid, and the agent is [1, 1] to start.
- There are some harmful elements: pits and Wumpuses. They are located near the 'Breeze' and Wumpuses near the 'Stench'.
- The agent's goal is to find the treasure and move safely out.
- The goal of the Wumpus world is to achieve the goal of getting the gold and getting out safely.

- Q1. What is AI? Explain the structure of an intelligent agent with its main components?
- Q2. Explain 'knowledge based agent in AI? & describe its working and main component with suitable example?
- Q3. Explain wumpus world as an example of knowledge based environment?
- Q4. Explain problem solving agent in AI?
- Q5. Explain nature of environment of AI. Discuss different type of environment?

Q1. → The AI is a branch of computer science that focus on the marketing computer & machine intelligents it unable to think learn more that data & makes can solve problems in understand human language.

∴ The structure of an intelligent agents is follow

1) Sensor - Sensor is the ear & eyes. what it uses to perceive the environment depending on the system.

1) camera in robot

2) microphone in voice system

2) Actuators - These are the part that let the agent act in physical system they could be motors, gears & mechanical part in software.

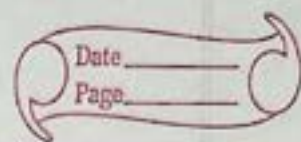
Name: Shruti Namdev Mali

Std: BCA SY Div: B

Time: 9.00 - 10.00

Date: 14/02/2026

15
25



Test No - 1

Q.1. Artificial intelligence is a computer science that focuses on making computers and machine intelligents. It is a machine to think, learn from data and make decisions to human.

There are four main components of structure of an intelligent agent.

There are included in sensors, accurators, percept sequence and

i) Sensors - The sensor is a included in ear and eye. they are found a agent. This agent eyes and ears what it uses throw percieve the sequencely.

ii) accurators - The accurators is a most important component of a Artificial intelligence. the accurators is a working after the sensors. the accurators is a think to learn from the data in a accurators in a structure of agent. the accurators is a important in structure of an agent.

- Q1] what is artificial intelligence. Explain the structure of AI with its main components.
- Q2] Explain knowledge based agent in AI & describe its working & main components with suitable example.
- Q3] Explain Wumpus world as an example of knowledge-based environment.
- Q4] Explain problem solving agent in AI.
- Q5] Explain Nature of environment in AI. Different types of environment. Discuss.

Q1].

→

Artificial intelligence is a branch of computer science that works with the working of machines.

AI helps machines think like humans, work like humans & perform the functions. It enables machines to think and make decisions like humans.

• components & structure of AI.

Sensors :

Sensors in AI works like the human senses. Sensors can be in any form. Biometric, face authentication & finger prints. It works or processes on data or information of environment.

Name:- Srushti Shantinath Magdum Time: 9 to 10

std:- BCA 54.

div:- B

Unit Test 1.

10

25

D	M	M	Y	Y	Y	Y			

1. what is Artificial agent? explain structure of an intelligent agent with its main components.
2. explain knowledge based agent in AI and describe its working and main components with suitable example.
3. explain wumpus world as an example of knowledge based environment.
4. explain problem solving in AI.
5. explain nature of AI environment of AI discuss different types of environment.

Q1 What is AI? Explain Structure of AI?

Q3 Explain KBA in AI and Explain its working and main components with example?

Q4 Explain Wumpus World as an eg of knowledge based environment.

Q2 Explain Problem solving agent in AI?

Q5 Explain Nature of Environment of AI discuss different type of environment?

Q1
→

• Structure of AI

• Structure of agent in AI is a foundation of how it works, its not just what agent does but all about the processes.

• Sensors :- This are the agents eyes and ears, this uses the perceive environment depending on system, sensors could be
i) cameras in robot
ii) microphones in voice assistance
iii) Temperature detector in smart thermostat.



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Department of BCA

Notice

Date: 12/02/2026

All the students of **BCA-III (Div-A,D)** are hereby informed that there is **Unit Test 1** of the subject **Java Programming** on **18/02/2026** at 09:00 am to 10:00 am.

The test is of 20 marks based on UNIT 1. Attendance is compulsory to all.



(Mr. V.B.Pujari)

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Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Question Paper of Unit Test 1

Subject: Java Programming

Marks: 20

Date : 18/02/2026

Time : 09:00 am to 10:00 am.

Q1. Attempt any two. [12]

1. Explain Polymorphism with its types and examples.
2. Explain constructor and destructor with example.
3. What is inheritance? Explain types of inheritance with examples.

Q2. Short Note on (Any two) [8]

1. Interface in java
2. this keyword
3. Wrapper Class
4. Abstract Class

Department of BCA
Attendance Sheet of Unit Test 1
Subject: Java Programming

Date: 18/02/2026

Sr. No	Name	Sign
1.	Suteja Dattatray Shelake.	S. Shelake ...
2.	Sanika Ranjeet Shipekar	S. R. Shipekar
3.	Samruddhi Madhukar Sarode.	Samruddhi Sarode
4.	Shruti Subhash. Tawade	Shruti Tawade
5.	Shraddha S. Shinde	Shraddha Shinde
6.	Monsvi M. Dutar	Monsvi Dutar
7.	Madhura Uday Sutar	Madhura Sutar
8.	Riddhi Shardul Prabhudesai	Riddhi Prabhudesai
9.	Sakshi Anil Sawant	Sakshi Sawant
10.	Ankita Prashant Yadav.	Ankita Yadav
11.	Somarth Sunil Shivangi	Somarth Shivangi
12.	Mridul Jayendra Tibile	Mridul Tibile
13.	Mandee Mukund Yekundi	Mandee Yekundi
14.	Sangam Subhash Vishwakarma	Sangam Vishwakarma

Sr. No	Name	Marks
1.	Suteja Dattatray Sholake.	13
2.	Sanika Ranjeet Shipekar	20
3.	Samruddhi. Madhukar. Sarode.	15
4.	Shruti. Subhash. Tawade	19
5.	Shraddha Sudhakar Shinde	16
6.	Mansvi Manohar Dutar.	16
7.	Madhura Uday Dutar	16
8.	Riddhi Shardul Prabhudesai	15
9.	Sakshi Anil Sawant.	15
10.	Ankita Praashant Yadav.	16
11.	Samarth Sunil Shivangi	12
12.	Mudul Jayendra Tibile	12
13.	Mandae Mukund Yekundi	11
14.	Sangam Subhash Vishwakarma	10

Name:- shruti.G.Tawade

Div:- D

19/20

Rollno:- 1866

classmate

Date

Page

2.1]3 What is Inheritance? Explain types with examples.

→ Inheritance:-

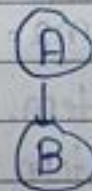
- ① Inheritance is a process that permits programmer to reuse the exiting class.
- ② The exiting class is known as base class, parent class or sub class.
- ③ And the new class is known as derived class, child class or superb class.
- ④ Inheritance use to reuse the class which is exiting.
- ⑤ It has tree like structure where parents are given there ability to the childrens.

* There are main three types of Inheritance in Java

- ① Single Inheritance
- ② Multilevel Inheritance
- ③ Hierarchical Inheritance.

1) Single Inheritance:-

- ① when one base class is being derived by one derived class is known as single Inheritance.
- ② There is only one parent class which is having only one child class is known as single Inheritance



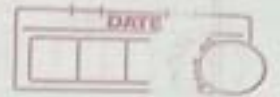
2) Multilevel Inheritance:-

- ① when one base class is being derived by one derived class and that derived class is being derived by another derived class is known as Multilevel

Date 1-18/2/26
Subj- Java

Name - Sanika .A. Shipekar

20/20



Q.1] Attempt any Two.

1] Explain polymorphism with its types & Examples.

→ Polymorphism - (many forms)

It is the polymorphism means poly means many forms. morphism means form.

Polymorphism is the Java programming language is used to the Java language.

There are Two types of polymorphism

- 1] Compile Time polymorphism
- 2] Runtime polymorphism

1] Compile Time polymorphism -

- It is also known as Static polymorphism & static binding.
- It is achieved by compile time polymorphism.
- It is the type of method overloading.

2] Runtime polymorphism -

- It is also known as Dynamic Method Dispatch.
- It is the process which a function call to be overridden method.
- It is the type of method overridden.

1] Method overloading -

- Method overloading is same name but different parameters. is called method overloading.

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Notice

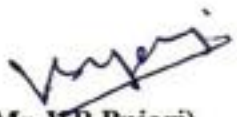
Date: 18/08/2025

All the students of BCA-III (Division A, C, D) are hereby informed that there is **Unit Test 1** of the subject **Linux** on **21/08/2025** at **11 am to 12 pm**.

The test is of 25 marks based on UNIT 1.

Attendance is compulsory to all.




(Mr. V.B.Pujari)

HOD

Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Question paper of Unit Test 1

Subject: Linux

Time: 11am to 12pm

Date: /08/2025

Q1. Multiple Choice Question

[5]

1. Linux was first developed by __

a.) Richard Stallman b.) Linus Torvalds c.) Dennis Ritchie d.) Ken Thompson

2. Which command is used to give file permission.

a.) chown b.) chmod c.) chgrp d.) ls

3. Which command is used to display entire content of files ?

a.) show b.) read c.) open d.) cat

4. What is the default shell used in most linux distributions ?

a.) Corn Shell b.) Bash Shell c.) Zsh Shell d.) Fish Shell

5. Which command is used to display the current working directory in linux?

a.) pwd b.) dir c.) cd d.) where

Q2. Attempt any two.

[16]

1. Explain Architecture of Linux.
2. Explain Hierarchical File System Structure with diagram
3. Explain file and directory manipulation commands.

Q3. Short notes (Any one)

[4]

1. Explain System Call and working procedure.
2. What is shell and explain types of shell ?



[illegible]

Date: /08/2025

[illegible]

Q1. Multiple choice question.

1) linux was first developed by ...

→ b) linux Torvalds.

2) Which command is used to give file permission.

→ b) chmod

3)

→ d) cat

4)

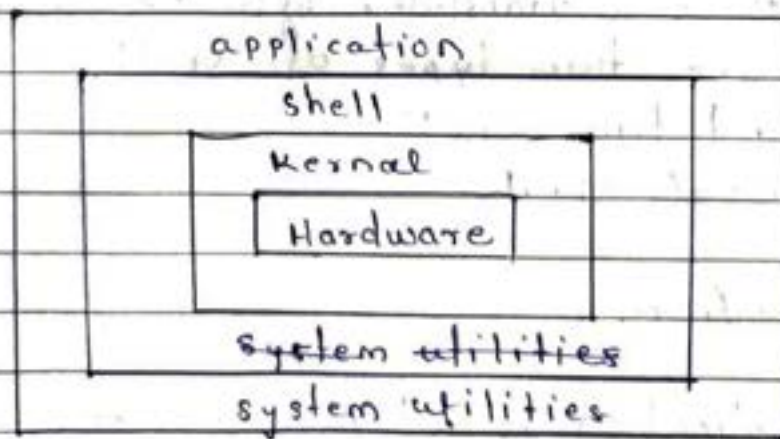
→ b) bash shell

5)

→ a) Pwd

Q2.

1.



Architecture of linux.

(1) Hardware

- The hardware is lowest layer of linux architecture.
- The hardware includes keyboard, RAM, mouse & other peripheral devices.
- The hardware is a physical component which creates the system.

(2) Kernel

- The kernel is the interface between user & hardware.
- it takes the commands from the shell & executes it's by accessing hardware.

(3) shell

- The shell is the text commandline which accept the command from the user & send it to the kernel.
- it acts as a translator between user & kernel.
- there are two types of shell,

(1) Command line shell

(2) Graphical shell

(4) application.

- The application is what user access to perform a specific or random tasks.
- eg. music player, chrome etc.

Name : Saleshi Anil Sawant

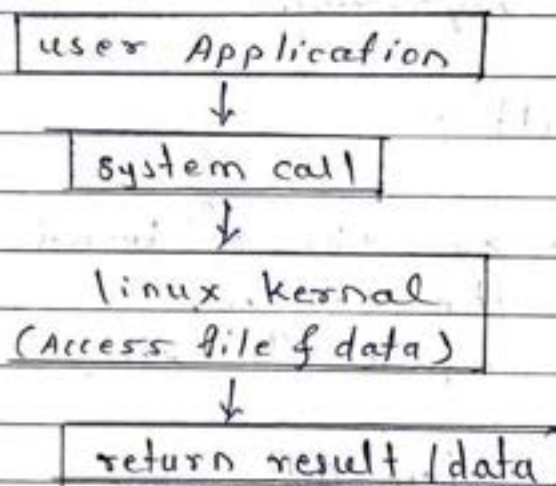
Roll no : 1506

Div : 'D'

Date : _____

• system call

- It is the interface between user & hardware.
- It get call to perform tasks like `write()`, `read`, `open()`, `close`.



• working of system call

• step 1 :-

• User application :-

- The user application is the what a user needs for performing task.
- consider a task that user who wants to perform like opening a file.

• System call :-

- The system get call for that operation.
- it is the interface between user application & hardware.

• linux kernel :-

- After the system call linux kernel switch the mode & accessed the hardware & resources that are required.

• return result :-

- After the execution of kernel it returns a result to the screen.
i.e opening a file etc.

• Types of system call

1. `open()` :- open the existing file.

2. ^{write}~~read~~`( )` :- ~~read~~ the file if it exist. if it is not then creat new file.

3. `write read ( )` :- read the file if it exists.

4. `close ( )` :- After completing the task close the file or releases all the resources.

Ph

3] cd :-

- cd is command which change directory to the given path.
- syntax :- cd [path]
- eg :- cd ~~[path]~~ home / document / xyz

4] mkdir

- mkdir is used to make a new directory or file on existing location.
- syntax :- mkdir [file / directory name]
- eg :- mkdir files

5] cat

- it is used to display the entire content of a file
- syntax :- cat

6] chmod

- it is used to give permissions.
- syntax :- chmod +x filename.sh

7] ls

- used to list the file in directory
- syntax :- ls

8] cp

- used to copy file
- syntax :- cp [file name]

9] whois

- returns to username
- syntax :- whois.

Unit test - I

Linux

23
25

Name- Harsh Suresh Varmath class B(AMT)-D

Q-1) multiple choice question

1) ~~b) linux Tarballs~~

2) ~~b) chmod~~

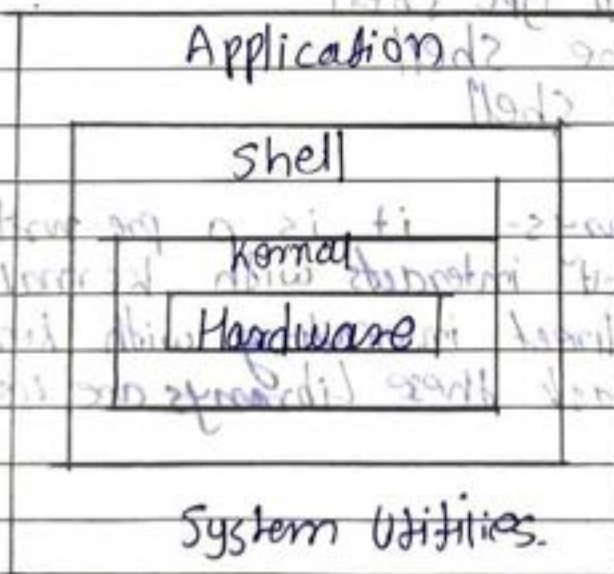
3) ~~d) cat~~

4) ~~b) Bash shell~~

5) a) Pwd

Q-2 Attempt any two

1) explain Architecture of Linux



①
②
③

Class - BCA, Ty

Name :- Ayesha Sayyad.

Div - D

Sub - Linux

Q1 MCQ's

~~1~~ c) Dennis Ritchie.

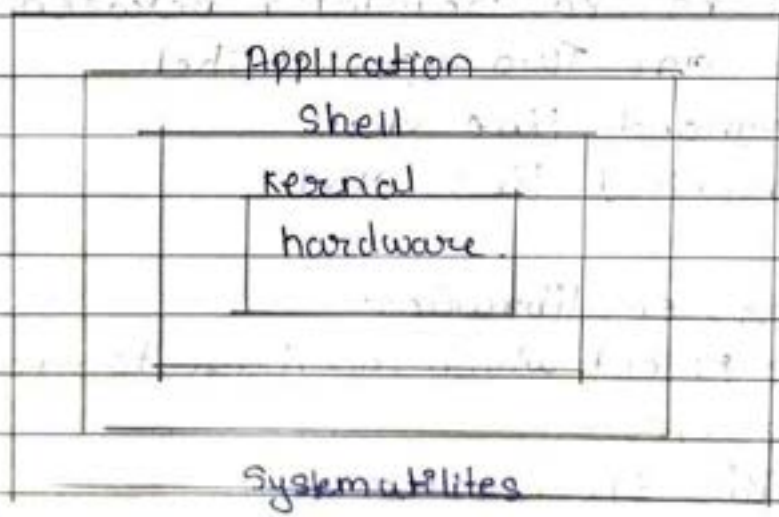
~~2~~ b) chmod.

~~3~~ c) open.

~~4~~ b) ~~dash~~ Bash shell

~~5~~ a) ~~from~~ ~~dash~~ ~~stress~~ Pwd

Q2.1 Explain Architecture of Linux.



Name - Riadhi S. Prabhudevi
BCA - TY 'D' Div.
Roll no - 1493

22
25

Date : ①

Q.1. MCQ.

① Linux was first developed by Linus Torvalds.

⇒ b) Linus Torvalds.

② b) chmod.

③ d) cat.

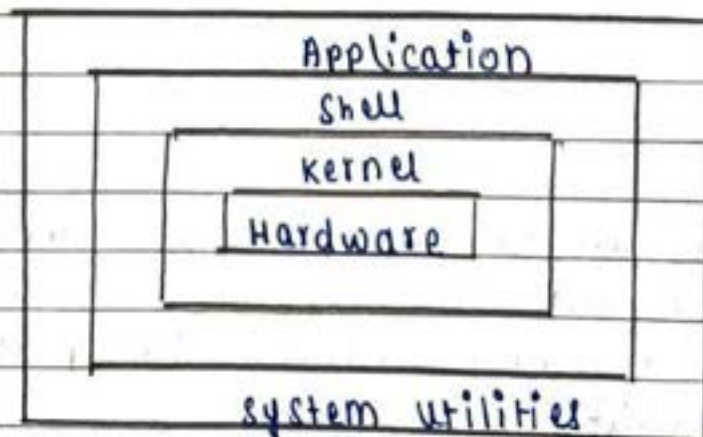
④ b) Bash shell.

⑤ a) pwd.

5

Q.2. Attempt any two.

1) Architecture of Linux -



Q1]

1] Dennis Ritchie 6] Linus Torvalds

2] 3] chmod

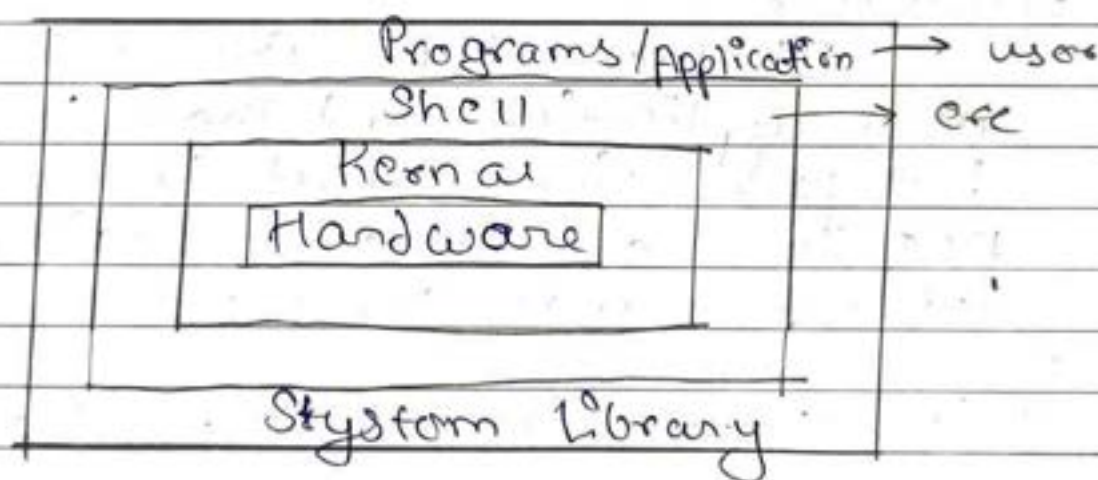
4] 5] cat

6] Bash shell

7] 8] pwd 9] cd

Q2]

1]



2] Hardware :-

It is the first layer of Linux architecture and the hardware directly interacts with the Linux OS. It helps to run the code or command faster. It directly gives the full extent of its power to the Linux OS so it runs faster and in better condition because of the direct interaction of hardware and Linux.

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Department of BCA

Notice

Date: 11/11/2025

All the students of BCA-II (Division A,B,C) are hereby informed that there is **Unit Test** of the subject **Python Programming** on **15/11/2025** at **09:00 am to 10:00 am**.

Attendance is compulsory to all.




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(Mr. V.B. Pujari)

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1.	Prachi Dnyandeo Karpe	<u>Prachi Karpe</u>
2.	Vishakha Kishorkumar Parmar	<u>Vishakha Parmar</u>
3.	Madhura Vaibhav Kulkarni	<u>Madhura Kulkarni</u>
4.	Rukhsar Sadik Kachhi	<u>Rukhsar Kachhi</u>
5.	Sanika Sanjay Kudale	<u>Sanika Kudale</u>
6.	Shraddha Pradip Kambale	<u>Shraddha Kambale</u>
7.	Shruti Bharti Dattatray Parit	<u>Shruti Parit</u>
8.	Anisha Devdas Pandane	<u>A.D. Pandane</u>
9.	Vedika Sambhaji Kiltedkar	<u>Vedika Kiltedkar</u>
10.	Aaditi Pradip Patil	<u>Aaditi Patil</u>
11.	Prachi Pravin Mane	<u>Prachi Mane</u>
12.	Samruddhi Mahadev Kumbhar	<u>Samruddhi Kumbhar</u>
13.	Prasanna Tukaram Kumbhar	<u>Prasanna Kumbhar</u>
14.	Praneeti P. Kumbhar	<u>Praneeti Kumbhar</u>
15.	Shraddha Krishnat Mulik	<u>S.K.M.</u>
16.	Samruddhi Rahul Kuvane	<u>Samruddhi Kuvane</u>
17.	Srushti Sandip Khade	<u>Srushti Khade</u>
18.	Sonali Manuti Mangute	<u>Sonali Mangute</u>
19.	Krutika Ramchandra Koli	<u>Krutika Koli</u>
20.	Pallavi Vilas Mhavale	<u>Pallavi Mhavale</u>
21)	Jiya A. Jamadar	<u>Jiya Jamadar</u>
22)	Pratiksha A. Nayakwadi	<u>Pratiksha Nayakwadi</u>
23)	Shruti Namdev Mali	<u>Shruti Mali</u>
24)	Rutika Rajendra Jainpure	<u>Rutika Jainpure</u>
25)	Samruddhi Ganapati Khavare	<u>Samruddhi Khavare</u>
26)	Priya Ramesh Misal	<u>Priya Misal</u>
27)	premkumar Rajaram Khandekar	<u>premkumar Khandekar</u>
28	Dhruv Chandresh Mehta	<u>Dhruv Mehta</u>
29	Sadhaik Suhais Kachlam	<u>SK</u>
30	Ombai Sanjay Mali	<u>Ombai Mali</u>
31	Amaan Shauki Kazi	<u>Amaan Kazi</u>



- 34) Chaitanya R. Maygankar
 35) Paras krishna Patil
 36) Navulhal R. Patil
 37) Omkar Satish Kadam
 38] Yash Ajay Medhe
 39] Shrikant Bhanu Kurn
 40) Prathmesh Eknath Lag
 41) Rajwade Palas Patil
 42] Aditya Arun Patil
 43) Atharva Suraj Mane



Sr.No	Name	Marks
1	Prachi Dnyandeo Karpe	14
2	Nishakha Kishorkumar Parmar	13
3	Madhura Vaibhav Kulkarni	15
4	Rukhsar Sadik Kachhi	10
5	Sanika Sanjay Kudale	14
6	Shraddha Pradip Kamble	13
7	Bhakti Dattatray Parit	12
8	Anisha Devdas Pandare	11
9	Vedilca Sambhaji Killeder	10
10	Aaditi Pradip Patil	18
11	Prachi Pravin Mane	15
12	Samruddhi Mahadev Kumbhar	14
13	Poornima Tulcarem Kumble	12
14	Praneeti Prashant Kamble	11
15	Shraddha Krishnat Mulik	16
16	Samruddhi Rahul Kuzane	15
17	Srushti Sandip Khade	12
18	Sonali Manuti Mangute	15
19	Krutika Ramchandrea Koli	13
20	Pallavi Vilas Bhavale	12
21)	Jiya A. Jamadar	15
22)	Pratiksha A Nakwadi	16
23)	Shruti Namdev Mali	12
24)	Rudika Rajendra Jainpure	15
25)	Samruddhi Ganapati Khavare	14
26)	Priya Ramesh Misal	15
27	Dhruv Chandresh Menka	18
28	Premkumar Rajaram Khandekar	17
29	Siddhant Sahas Karkare	15
30	Om Sai Sanjay Mali	14
31	Amaan Shakti. Kazi	13
32)	Namrata Dilip Majgonkar	12

Vivekanand College (An Empowered Autonomous), Kolhapur

Department of BCA

Unit Test Photos

Subject: Python Programming

Date: 15/11/2025



Q1. - Sonali namit mangude
15
20

Q1.

⇒ quick van zoom

Q2.

⇒ 3. py

Q3.

⇒ 3 brackets

Q4.

⇒ 3 oef

Q2.

⇒ conditional statement :-

— The conditional statement is most important of python programming language.
— There are three conditional statement in python.

i) if statement

ii) if-else statement

iii) elif statement

① if statement :-

• Definition :-

— if statement is used to test particular condition and if condition is true then if block is executed of a code is known as if block.

• Syntax :-

If expression:

Statement

• Example :-

```
a = int(input("Enter the number:"))
```

```
if a % 2 == 0
```

```
    print("Given number is even.")
```

• Flowchart :-

15
20

DATE

Name - Jyoti A. Jamadar

Roll no - 94

Sub - Python

Q1)

1)

→ c) Guido van Rossum.

2)

→ c) .py

~~x 3)~~

→ d) all of the above.

4)

✓ →

b) def.

Q2) ³

→

Branching or conditional statements are used for given conditions in a program. If we have to give conditions in a particular program we use conditional statements.

There are total 3 conditional statements in python.

a) if statement :-

The if statement is used to give condition in the program. If the 'if' block of code is true it will execute or else not.

- 1) a) Guido van Rossum is developed python programming language.
- 2) c) `.py` is a correct extension of the python file.
- 3) a) Indentation is used to define a block of code python in language.
- 4) b) def keyword is used for function in python language.
- Q.3 looping statement is a used loop for the programming language.
The looping statement is used for the execute the loop in program.
There are three types of looping -
- 1) While loop
 - 2) Do-while loop
 - 3) For loop

1) While loop -

While loop is a type of looping statement. The while loop is used for run the code. While loop is a used for the statement is does not a false the statement is execute. and the statement is false the code is execute.

Syntax -

While loop

expression:

Statement:

14.0

2. [] Guido van Rossum

3. [] .py

3. [] brackets

3. [] def

6.2. Branching or conditional statement :

In branching statement or conditional statement, if the statement is based on the true or false.

There are three conditional statements are present in python language.

- i) if statement
- ii) if else statement
- iii) elif statement.

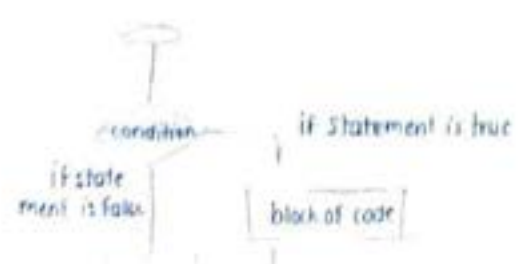
i) if statement :

- In python language, if conditional statement is used when there is only one condition in the code.
- If the condition is true then the block of code executed.
- If the condition is not true then the iteration directly exits the iteration.

Syntax :

```
expression  
if (condition) :  
    block of code.
```

Flowchart

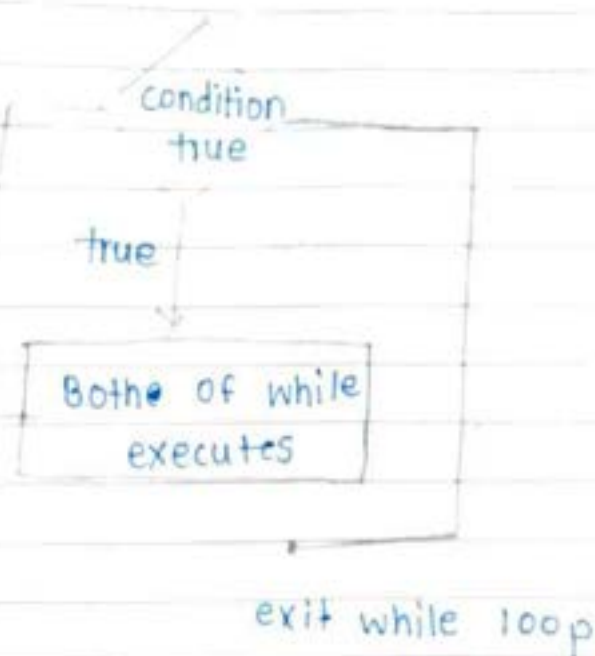


looping statements.

1) while loop

while loop is either infinite or conditional.

The while loop contain boolean expression



Syntax :

while (expression) :
Statement

ii) For loop -

For loop is used for repeated execution of a group of statement.



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

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Department of BCA

Notice

Date: 11/02/2026

All the students of **BCA-II (Division B And C)** are hereby informed that there is **Unit Test 1** of the subject **Artificial Intelligence** on **14/02/2026** at 09:00 am to 10:00 am.

The test is of 25 marks based on UNIT 1. Attendance is compulsory to all.




(Mr. V.B. Pujari)

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Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Question Paper of Unit Test 1

Subject: Artificial Intelligence

Marks:25

Time : 09:00 am to 10: 00 am

Date : 14/02/2026

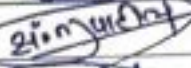
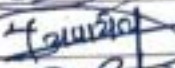
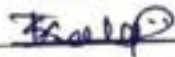
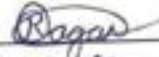
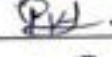
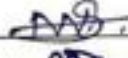
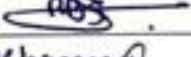
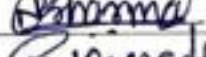
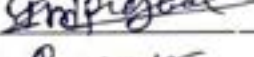
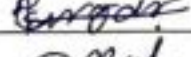
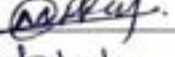
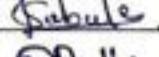
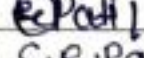
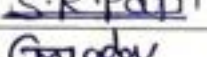
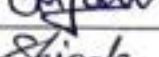
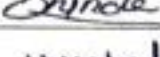
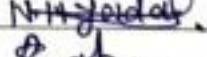
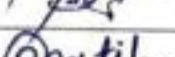
Q1. What is Artificial Intelligence? Explain the structure of an intelligent agent with its main components. [5]

Q2. Explain a Knowledge based agent in AI and describes its working and main components with suitable example . [5]

Q3. Explain Wumpus world as an example of knowledge based Environment . [5]

Q4.Explain problem solving agent in AI. [5]

Q5. Explain nature of Environment of AI. Discuss different type of Environment. [5]

Sr. No	Name	Sign
1	Prathmesh Raju Patil	
2	Sanskar Nana Patil	
3	Prasad laxman Patil	
4	Sahil Nivrutti Patil	
5	shubham krishna Talap	
6	KUNAL YADAV	
7	Ragan S. Singh	
8	Prathmesh Kaishat Patil	
9	Satyjeet Sarda Patil	
10	ved. D. Shingore	
11	Prathmesh krushnat sagavakar	
12	Nishant vijay solvi	
13	Raj Bhimrao Solvi	
14	Nitesh. S. Sharma	
15	Bhanav Gajendra Shipugade	
16	Akash Prakash Sangar.	
17	mohan Raju Rathod	
18	Pritya Rajendra Sabale	
19	Rutika Dattatray Patil	
20	Sayali Ramchandra Patil	
21	Gayatri Mansing Yadav	
22	Srushti Uttam Shinde	
23	Nikita Namdev yadav	
24	Siddhika Balwant wagh	
25	Pranita Dadasa Sathe	
26	Rusika Kiran Patil	

[illegible]

Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Marks Sheet of Unit Test 1

Subject: Artificial Intelligence

Date: 14/02/2026

Sr. No	Name	Marks
1)	Prathmesh Raju Patil.	17
2)	Sanskat Nana Patil	16
3)	Prasad (Arman Patil)	16
4)	Sahil Nirutti Patil.	15
5)	Shubham Kaishnu Talap	15
6)	KUNAL YADAV	13
7.	Ragan S. Singh	12
8.	Prathmesh Kaishnat Patil	18
9.	Satyjeet Sordore Patil.	16
10	Ved. D. Shingone.	14
11.	Prathamesh Krushnat Sagavakar	10
12.	Nishant Vitay Salvi	14
13.	Raj Bhimrao Salvi	10
14.	Nitesh S. Sharma	9
15.	Pranav Soryezoo Shipugade	13
16.	Akash Prakash Sangam.	10
17.	Mohan Raju Rathod.	08
18	Priya Rajendra Sabale	09
19.	Ruhka Dattatray Patil	20
20.	Sayali Ramchandra Patil	22
21.	Gayatri Mansing Yadav	07
22.	Srushti Uttam Shinde	13
23.	Nikita Namdev Yadav.	09
24.	Siddhika Balwant Wagh	08
25.	Pranita Dadasa Sathe	10
26.	Rusika Kiran Patil	17
27.	Sameer Dhondiram Patil	14

[illegible]

Q.1.) ~~What~~ AI. It is Artificial intelligent ^{it's} ~~that's~~ technique to collect info, understand it, learn from past experiences, make decision and take action.

AI works like human.

ex. chatbot, chatgpt.

• AI agent

- It is Artificial agent that ~~per~~ ^{per}form entities that pursue their environment make decision and take action.
- in simple word agent collect / take input from environment and gives output (action)

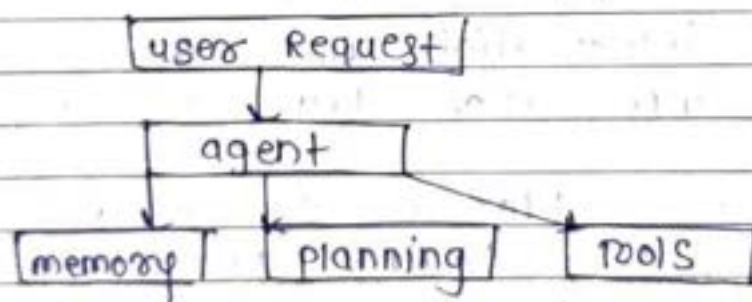
It uses sensor to get information and also actuator.

ex.

1) human agent : sensor : Eyes, nose, ears
actuator : hand, mouth, legs.

2) software agent : sensor : keyboard, mouse
actuator : files, screen.

there are main components



① user Request.

The user ask question or Request it understand the agent needs to address

② agent / brain-

It is main control unit. agent know everything understand request, thinks what to do and control everything else.

- Q.1 What is artificial intelligence. Explain the structure of intelligent agent with its main component.
- Q.2 Explain knowledge base agent in AI & describe its working and main component with suitable example.
- Q.3 Explain vacuum world as an example of knowledge base environment.
- Q.4 Explain problem solving agent in AI.
- Q.5 Explain nature of environment of AI & discuss different type of environment.

1) The artificial intelligent in AI is technology to help the machine collect data, understand it, learning from experience make decision & take action.

The artificial intelligent is work like human understand it, learning & then decision automatically.

AI agent.

AI agent is software entities that perceive the environment. take input & give take action.

These agent are active to specific goal.

It is simple work to like the agent is take input for environment & gives the output.

If anything can be sense to the surrounding it & take action. it tries to sensor for the give info agent.

1. What is AI? Explain the structure of Intelligent agent with its components.
2. Explain knowledge base agent in AI & describe its working & main component with suitable example.
3. Explain wump's world as an example of knowledge base environment.
4. Explain problem solving Agent in AI.
5. Explain Nature of environment in AI. Discuss different types of environments.

Q1. Artificial Intelligence :-

AI is a technology that helps machine to collect data, understand it, learn from experience, make decision & take action. AI works like human by collecting the information, understand it, solving the problem & make decision automatically.

Structure of AI Agent :-

Structure of AI agent is the foundation of how the agent can work. It is not just about the what agent can do but how it processes the world to perform action.

Every agent has essential components

1. Sensor

2. Percept Sequence

3. Actuator

4. Agent Function

Sensor

Percept Sequence

Agent Function

Action via actuators

- 1) What is artificial intelligent explain the structure of intelligent being with his components.
- 2) Explain knowledge base agent in AI and describe its working and make main components with suitable example.
- 3) Explain Wumpus world as an example of knowledge base environment.
- 4) Explain problem solving agent in AI.
- 5) Explain nature of environment of AI discuss Different types of environment.

Q.3)

The wumpus world is a classical example in a knowledge based environment in AI.

The agent use knowledge and make reasoning then take action.

Understanding the wumpus world :-

- 1) The wumpus world is a 4×4 grid with 16 rooms.
- 2) The agent start room from (1,1) facing
- 3) The agent main goal is find gold and get out safely.
- 4) They are dangerous like pit and wumpus.
- 5) Agent can't see everything.

Q.2. Explain Knowledge Base agent An A.I & describe its working & main Components with Suitable example.

→ - Knowledge Base Agent is an intelligent Agent that uses stored knowledge, learn from experience, puts logic, rule & facts & make decision to solve a problem.

- It stores information in knowledge Base (KB).

- It uses inference system to apply rules & facts.

- It works fastly if a decision is best.

- It thinks & applies logics to achieve a goal.

- Example:

Fact: Patient has fever

Fact: Patient has Cough.

Rule: IF Patient has fever & Cough, the disease is Flu.

Rule: If patient has fever & headache, the disease is Dengue.

- It uses reasoning that is forward chaining & backward chaining.

- It is an agent that follows step one by one & achieves goal.

- It is uses in medical diagnosis system.

/08/2025

e is Unit

V.B.Pujari

HOD

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Department of BCA

Notice

Date: 16/08/2025

All the students of BCA-III (Division A, B, C, D) are hereby informed that there is **Unit Test 1** of the subject **ASP.NET** on **21/08/2025** at **10 am to 11 am**.

The test is of 20 marks based on **UNIT 1**.

Attendance is compulsory to all.




(Mr. V.B. Pujari)

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Department of BCA

Question paper of Unit Test 1

Subject: ASP.NET

Time: 10am to 11am

Date: 21/08/2025

Q1. Attempt any two.

[14]

1. Explain .Net Framework Architecture in brief.
2. Explain C# loops with definition, syntax, flowchart example.
3. Explain type casting and their types in brief.

Q2. Short notes (Any two)

[6]

1. .DLL and .EXE files
2. Boxing and Unboxing
3. JIT compiler



Vivekanand College (An Empowered Autonomous), Kolhapur.

Department of BCA

Attendance Sheet of Unit Test 1

Subject: ASP.NET

Date: 21/08/2025

Sr.No	Name	Sign
1.	Nirjara Yogesh Chougale	Nirjara
2.	Diksha Subhash Chavan.	Diksha
3.	Simran Dastagir Bhataxi	Simran
4.	Sanjay Durgappa Gadivaddas	Sanjay
5.	Asmita Jivan Bhosale	Asmita
6.	Archita Amit Chavan	Archita
7.	Neha Sandeep Gurusav	Neha
8.	Deeya Ashwini Bhatia	Deeya
9.	Insha Mansoor Attar	Insha
10.	Aasiya Amit Hajrat	Aasiya
11.	Aatmaja Hemant Athate	Aatmaja
12.	Vedika Krushmat Chougale	Vedika
13.	Vinisha Vidyadhar Gavali	Vinisha
14.	Aijali Ramchandrar Aarekar	Aijali
15.	Shravani Milind Dafalpure	Shravani
16.	Mouthili Marsing Adnait	Mouthili
17.	Shruti Dayanand Halwai	Shruti
18.	Ankita Gayaman Chopade	Ankita
19.	Ankita Krishna Desai.	Ankita
20.	Sai Raju Balekundri	Sai Raju
21.	Hardik Dayanand Ghatage	Hardik
22.	Yash Sandip Hasam	Yash
23.	Bhushan Bhikaji Farakate	Bhushan
24.	Jayankur Anil Chougale	Jayankur
25.	Karan Ankush Chougale	Karan
26.	Pratik Prakash Chougale	Pratik
27.	Rohit Ravirahab Chougale	Rohit
28.	Hyder Sultan Desai	Hyder
29.	Anurag Satish Bargale	Anurag
30.	Atharv Nandkishor Bhosale	Atharv
31.	Ritesh Babarab Bhumbhar	Ritesh
32.	Atharv Dilip Atyalkar	Atharv
33.	Akash Babasa Chougale	Akash
34.	Karan Keishnat Chougale	Karan



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Department of BCA

Mark Sheet of Unit Test 1

Subject : ASP.NET

Date: 21/08/2025

Sr.No	Name	Marks
1.	Nirjara yogesh Chougule.	15
2.	Diksha Subhash Chavan.	13
3.	Simran Dastagir Bhataxi	14
4.	Asmita Jivan Bhosale.	12
5.	Archita Amit Chavan	9
6.	Neha Sandeep Guroav.	11
7.	Deeya Ashwini Bhutia	14
8.	Instha Mansoor Attar	10
9.	Aasiya Amit Hajarar	18
10.	Aarmaja Hemant Amate	13
11.	Vedika krushnat chougale	11
12.	Vinisha Vidyadhar Gavali	14
13.	Anjali Ramchandrar Anekar.	15
14.	Shravani milind Dafalpure.	9
15.	Maithili Mansing Adnalk.	10
16.	Shruti Dayanand Halwai	11
17.	Saniya Sureshappa Gadivaddar	12
18.	Ankita Gayaman chopade	13
19.	Ankita krishna Desai.	11
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21.	Hardik Dayanand Ahotage	13
22.	Tosh Sandip Hasam	14
23.	Bhushan Bhikaji Borakate	17
24.	Jayankur Anil Chougule	16
25.	Karan Ankush Chougule	15
26.	pratik prakash Chougule	13
27.	Rohit Ramesh Chougule	12
28.	Hyder Sultan Desai.	15
29.	Anurag Satish Bargale.	13
30.	Attharu Nandkishor Bhosale.	17
31.	Ritesh Ramesh Bhumbar	18
32.	Attharu Dilip Atyalkar	13



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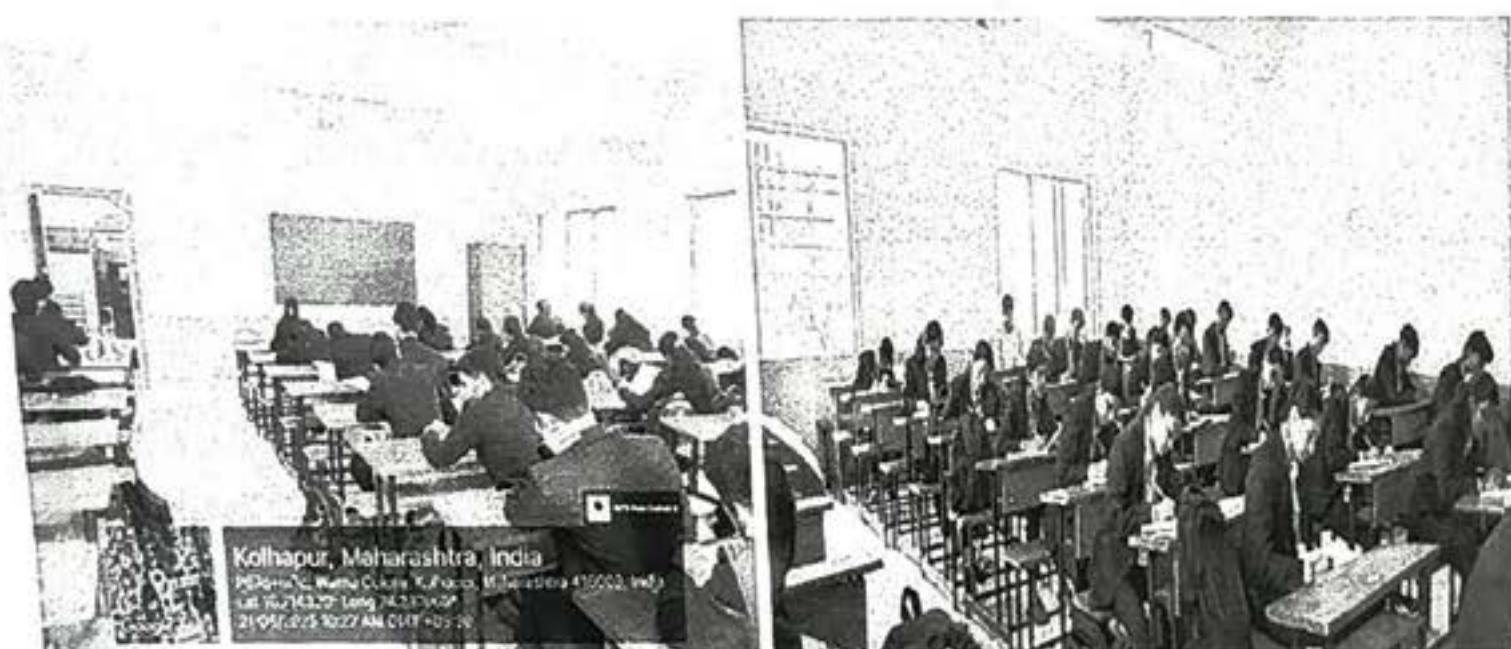
Department of BCA

Subject: ASP .NET

Test Photos

: 10:00 am to 11:11 am

Date : 21/08/2025



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Attempt Any Two

Que 1. Explain .NET framework Architecture in Brief.

Que 2. Explain C# loops with definition, syntax, flowchart with example.

Que 3. Explain type casting and their types in brief.

Attempt Any Two

Que 1. DLL and EXE Files.

Que 2. Boxing and Unboxing.

Que 3. JIT Compiler.

Ans: 1. .NET Framework Architecture.

- It includes following points.

1) Common Language Runtime (CLR):

- CLR that is common language runtime it converts source code to the byte code.

- Converted code can be called as CIL or MSIL which is (Common Intermediate Language or Microsoft Intermediate Language).

- Later on JIT Compiler (Just In Time) converts that code to native code or machine readable code.

2) Common Type System (CTS):

- Common type system does the work to match datatypes in runtime coding.

- It matches the data and values of datatypes like if datatype in javascript is declared and vb-script is also declared then CTS will help to match the values and data and datatypes.

3) Common Language Specification (CLS):

- It defines set of rules and regulations to the code at runtime.

- It checks for the corrections or accordingly allow you or may not allow you to use that particular rules applied. for ex: symbols, upper case lower case letters.

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SID - BCA 3rd yrs
Subject - ASP.NET
Roll no - 1276

9
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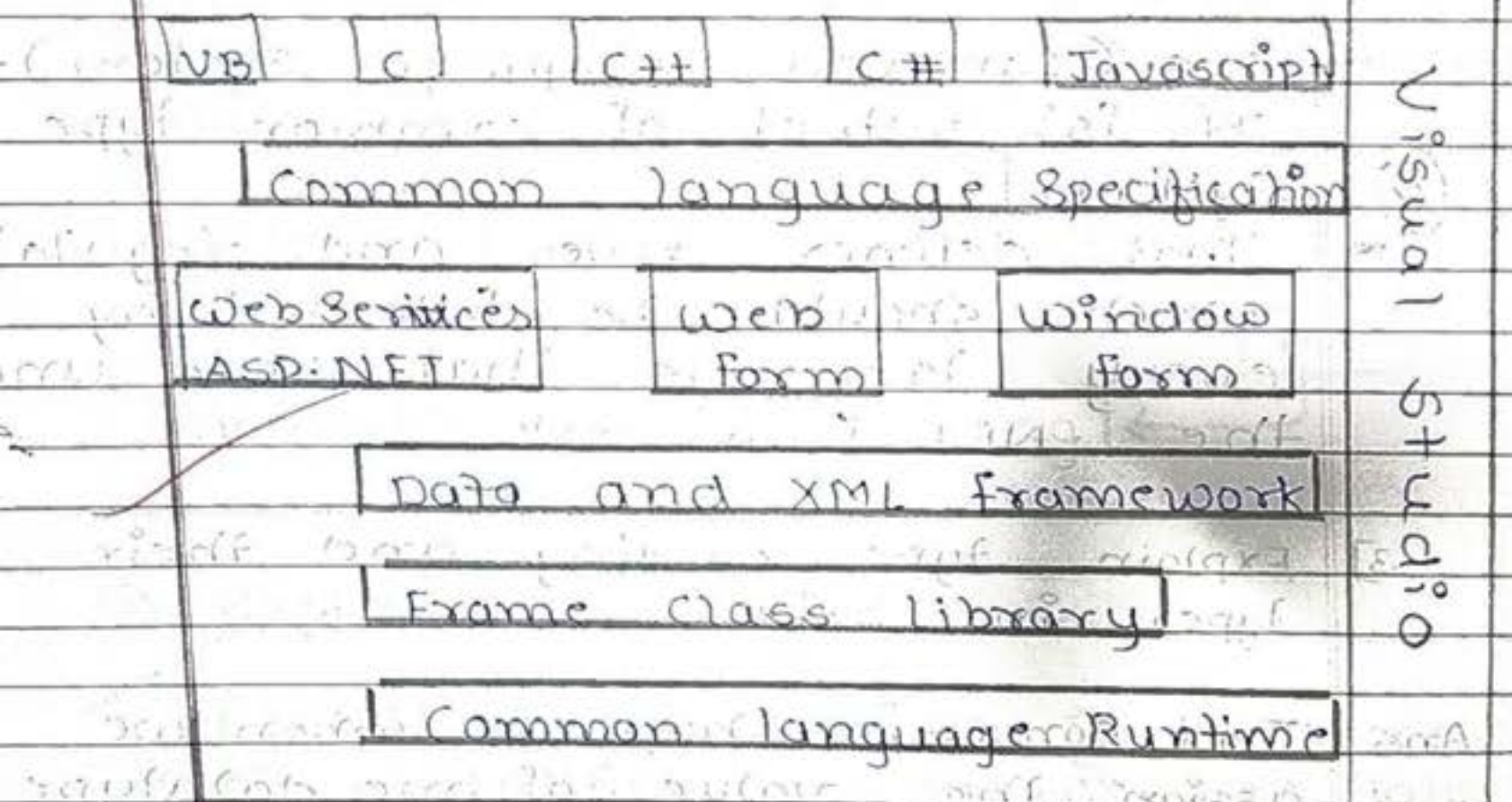
Page No.	
Date	

TEST

1] Attempt Any two questions out of the following.

2] Explain .NET Framework Architecture in brief.

The .NET Framework is a software developed by Microsoft provides a common programming platform for developing an application (such as websites) running on different operating system (such as windows).



CIL (Common Language Runtime) - The helps to convert source code into the byte code and this byte code is known CIL or MSIL.

Explain .NET in C# loops with definition, syntax flowchart with example.

Introduction.

Looping in programming language is a way to execute a statement multiple times, in depending on the looping statement.

There are three types of looping statement :-

- 1) While Loop
- 2) For loop
- 3) do-while

1) While Loop :-

While loop is the working in C# is the test condition is given at the beginning of the loop and all the statements are executed till the given boolean condition is satisfied.

Syntax :-

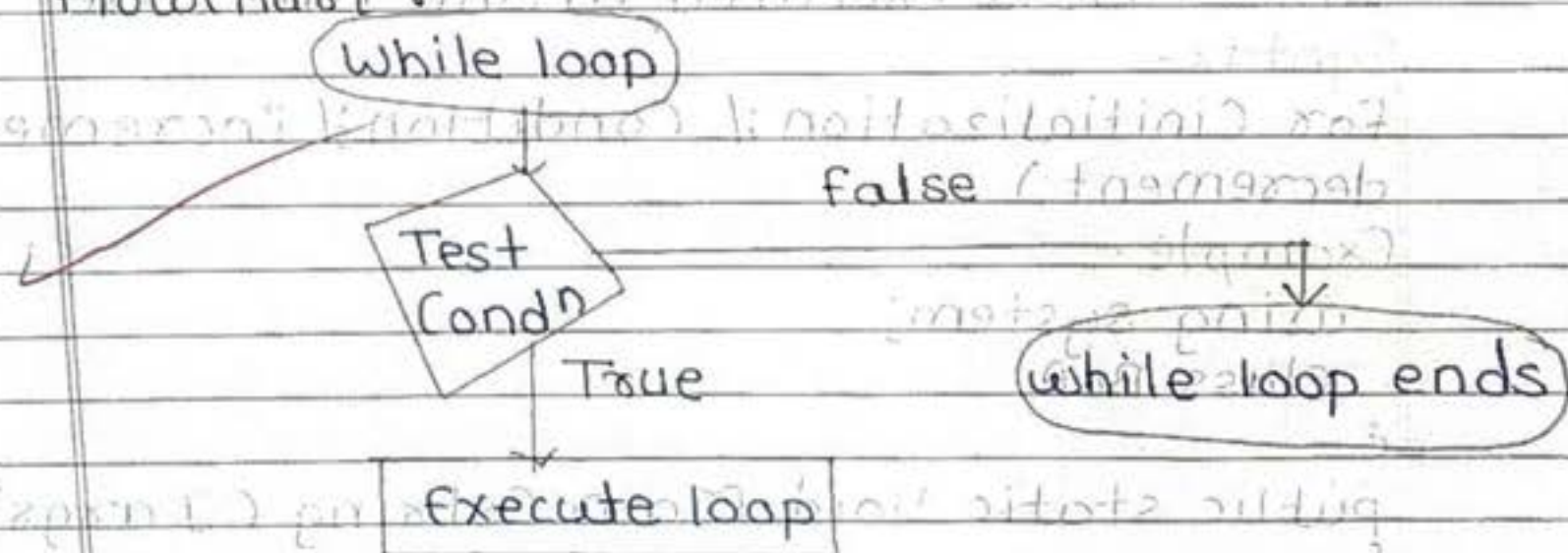
While (Condition)

{

Statements

}

Flowchart :-



.NET Test

Attempt (Any 2) (14)m.

1. Explain .NET framework architecture in brief.
2. Explain C# loops with definition, syntax, flowchart with example.
3. Explain type casting & their types in brief.

2. Short notes:- (Any 2) (6)m.

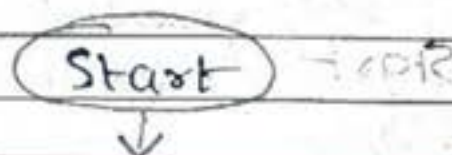
1. DLL & EXE files
2. Boxing & Unboxing
3. JIT Compiler.

2. Looping statements in C# is used to control the flow of statements in the program. The program instead of repeating can be done by using the simple syntax of loops. There are 3 types of loops in C#.

- a. While loop
- b. do while loop
- c. for loop.

a. for loop:- This loop is different from the other 2 loops that is because this loop gives all the condition in the same line at the beginning of the program. Rather than do while loop & while loop. Here only if the condition meets true the code is executed.

Syntax for (initialization, condition, increment/decrement)
 {
 // code to be executed
 }

Flowchart:-

Attempt Any two

1] Explain type casting & their types in brief.

→ Type casting :- Type casting is the main important concept in C#.

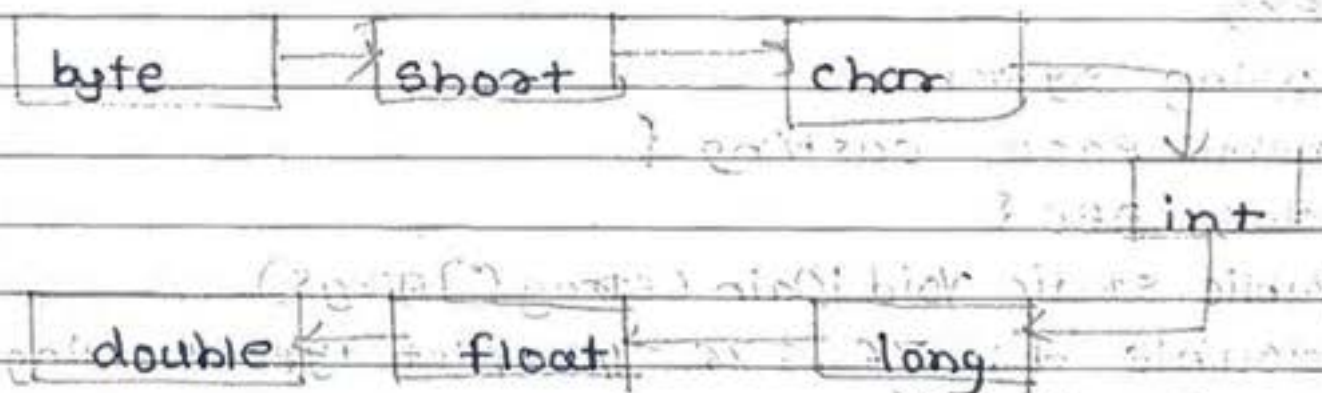
Types of type casting -

1] Implicit

2] Explicit

1] Implicit :-

implicit is important type of casting. In C#, implicit casting is also known as automatic.



ex.,

```
using System
```

```
namespace casting {
```

```
class ABC {
```

```
public static void main(String[] args)
```

```
int i = 57
```

```
long l = i;
```

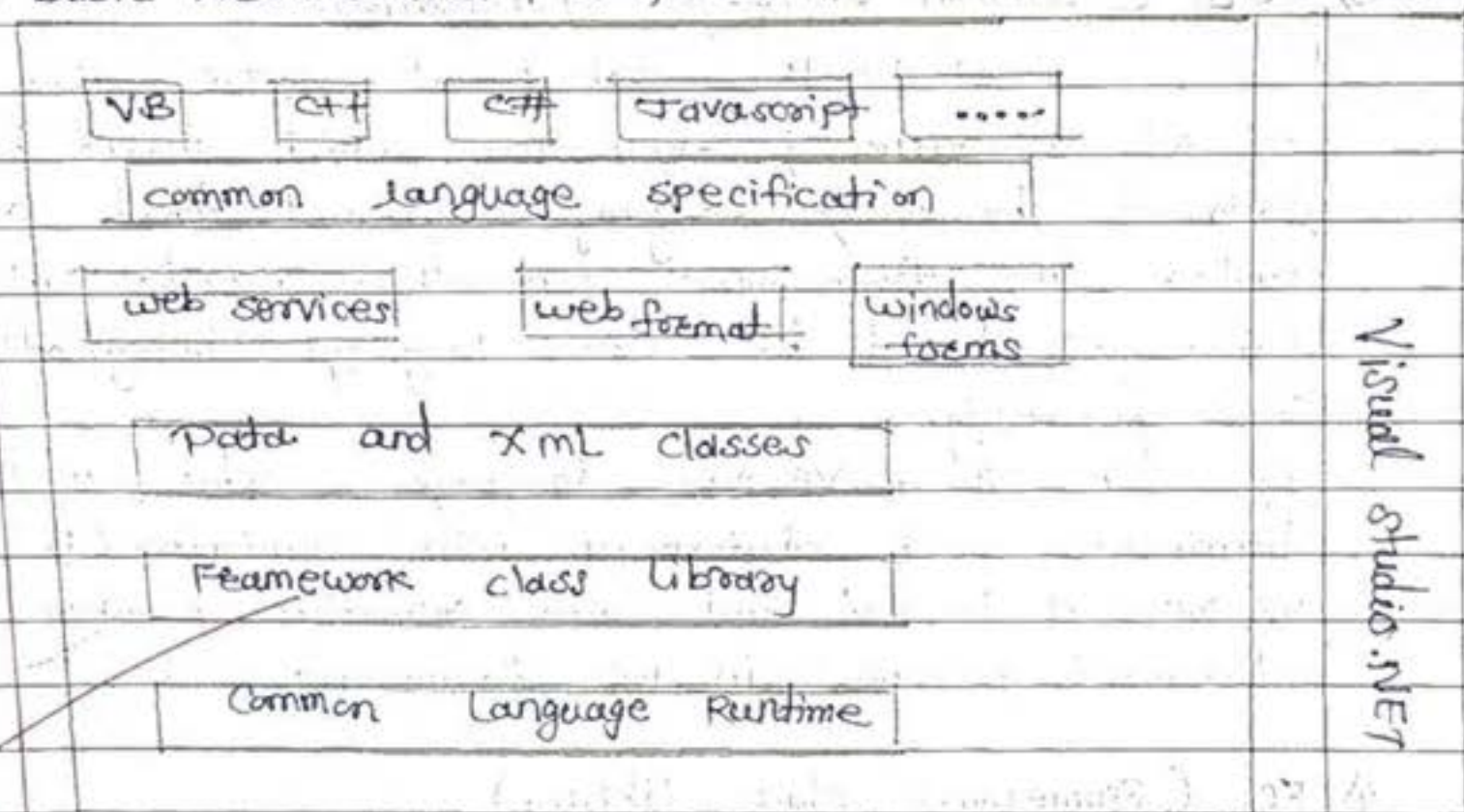
```
float f = l;
```

```
Console.WriteLine("int value" + i);
```

Explain in detail .NET framework Architecture.

The .NET framework Architecture is a software development framework developed by Microsoft that provides a common programming platform for the development of application running on different operating system. A .NET framework is also collection of software component & API for building & running application on microsoft .NET platform. It provides a common programming model that developers can used to create programs that can run on multiple platforms.

- Basic Architecture & component stack of .NET framework



1) CLR (Common Language Runtime)

It is the important part of the .NET framework. It is also helps to convert the source code into the byte code & this byte code is known as CIL & MSIL. After completing conversion into byte code a CLR uses JIT compiler at runtime that helps to convert CIL or MSIL code into machine code / native code.



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-Shikshanmaharshi Dr. Bapuji Salunkhe

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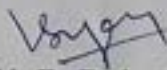
Date: 06/10/2025

Notice

This is to inform all students of BCA-III (Div-B) that a Python Unit Test will be conducted on 7th October,2025 at 10.00 am to 11.00am.

Note:

- 1) Attendance is Compulsory to all.


Mr. V. B. Pujari

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8-div.

* Pythou *

Roll No.

Test

Date
Page

Name	7/10/25	8/07/25	9/07/25	10/7/25	11/7/25
1) Simran Sankar Jamadar	Simran				
2) Shiwani N. Jadhav	Shiwani	Shiwani	Shiwani		Shiwani
3) Saubhatee S. Khatkar	Saubhatee	Saubhatee	Saubhatee		Saubhatee
4) Siddhi Rajesh Jadhav	Siddhi	Siddhi	Siddhi		Siddhi
5) Siddhi S. Hattikote	S.S.H.		S.S.H.		S.S.H.
6) Sambodhi R. Kamble	Kamble	Kamble	Kamble		Kamble
7) Samudhi Yuvraj Kumbhar	S.K.	S.K.	S.K.		S.K.
8) Vaibhavi V. Jamsandekar	V.	V.	V.		V.
9) Vaishnavi R. Kamble	Kamble	Kamble			Kamble
10) Aarya S. Jadhav	Aarya	Aarya	Aarya		Aarya
11) Pranav S. Khegade	P.	P.	P.		P.
12) Parth C. Khot	P.K.				
13) Aditya A. Kumbhar	A.K.	A.K.	A.K.	A.K.	
14) Pranav S. Kumbhar	P.K.		P.K.	P.K.	
15) Dhanu D. Hegale	D.		D.	D.	
16) Abhishek A. Kachare	A.K.	A.K.	A.K.	A.K.	A.
17) Atharv D. Hupare	A.H.	A.H.			A.H.
18) Devendra R. Kamble	Kamble	Kamble			Kamble
19) Omkar N. Kalekar	O.K.	O.K.		O.K.	O.K.
20) Tejas H. Kamble	T.H.	T.H.	T.H.	T.H.	T.H.
21) Yash R. Kamble	Kamble				
22) Pritam S. Hubali	P.H.				
23) Abhijit P. Khadke	A.P.	A.P.	A.P.		A.P.
24) Shivraj K. Kalange	S.K.	S.K.	S.K.	S.K.	S.K.
25) Jubes M. Inamdar	J.M.	J.M.			
26) Ayon R. Inamdar	A.R.	A.R.			
27) Firohan L. Kumbale	F.L.	F.L.	F.L.		F.L.
28) Swapnil S. Kamble	S.K.	S.K.	S.K.		S.K.
29) Pratik Suresh Jadhav	P.S.	P.S.		P.S.	P.S.
30) Sabil Shabbir Jamadar	S.J.	S.J.	S.J.	S.J.	S.J.
31) Rutuja Ganesh Majgaonkar		R.G.	R.G.		R.G.
32) Shreya Prakash Jadhav		S.P.	S.P.		S.P.
33) Sakshi Maruti Jadhav		S.M.	S.M.		S.M.

* TY. B - R Programming *

Internal Sheet

Roll no	Name	Ass 1	2	3	4	Gen	Vi vi	Test (marks)	
1.	Sadiya Khan	✓	✓	✓	✓	✓	A+	23	
2.	Navika Mintrale	✓		✓	✓	✓	O	12	→ 65
3.	Ankita Kadam	✓	✓	✓	✓	✓	C	15	
4.	Snehal Kumbhar	✓	✓		✓	✓	A+	18	
5.	Amruta Jogam	✓	✓	✓	✓	✓	A+	23	:
6.	Rohan Kamble	✓				✓	A+	20	
7.	Devendra Kamble	✓	✓	✓	✓	✓	B	23	
8.	Pranav Kumbhar	✓				✓	A+	20	
9.	Aditya Kumbhar	✓		✓	✓	✓	A+	23	
10.	Swapnil Kamble	✓		✓	✓	✓	A+	22	
11.	Omkar Kolekar	✓						22	→ 40 → 75
12.	Siddhi Hattikote	✓				✓		23	
13.	Hikita Kamble	✓				✓		21	
14.	Pratik Jadhav	✓		✓	✓	✓	A	22	
15.	Abhijit Khade	✓			✓	✓	O	20	
16.	Sahil Jamadar	✓				✓	B	21	
17.	Siya Kolate	✓	✓	✓	✓	✓	A+	23	
18.	Amruta Kamat	✓	✓	✓	✓	✓	B	20	
19.	Jyoti Kalyanshetti	✓	✓	✓	✓	✓	A	22	
20.	Tanvi Jamsendekar	✓	✓	✓	✓	✓	B A	22	
21.	Vaishnavi Kamble	✓	✓	✓	✓	✓	A+	23	
22.	Vaibhavi Jamsendekar	✓	✓	✓	✓	✓	A+	23	
23.	Arya Jadhav	✓	✓	✓	✓	✓	A	20	
24.	Simran Jamadar	✓		✓	✓	✓		18	
25.	Sneha Kamble	✓		✓	✓	✓		12	
26.	Aboli	✓				✓	B	14	
27.	Mahek Jyani	✓	✓	✓	✓	✓	A+	23	
28.	Shivani Jadhav	✓	✓	✓	✓	✓	A+	23	
29.	Pranav Hegale	✓		✓	✓	✓	O	21	
30.	Raj Kate	✓		✓	✓	✓	B	18	
31.	Sai Karande	✓	✓	✓	✓	✓	A+	20	
32.	Gagan Karande	✓	✓	✓	✓	✓	A	18	
33.	Chaitanya Jadhav	✓	✓	✓	✓	✓	B	18	→ 75
34.	Ayan Inamdar	✓	✓	✓	✓	✓	C	18	→ 65
35.	Jubek Inamdar	✓	✓	✓	✓	✓	A+	23	
36.	Prushlee Khatke	✓	✓	✓	✓	✓	A+	23	
37.	Siddhi Jadhav	✓	✓	✓	✓	✓	B	15	
38.	Gayatri Kalekar	✓		✓	✓	✓	B	16	→ 70
39.	Pratik Hubali	✓		✓	✓	✓	B	20	
40.	Suhag Kutale	✓		✓	✓	✓	A+	22	
41.	Abhishek Kachare	✓		✓	✓	✓	A	18	
42.	Jay Jadhav	✓		✓	✓	✓	C	18	
43.	Yash Kamble	✓		✓	✓	✓	A+	23	
44.	Shivani Kalange	✓	✓	✓	✓	✓	A	18	
45.	Shreyo Jadhav	✓	✓	✓	✓	✓	A	19	
46.	Sakshi Jadhav	✓	✓	✓	✓	✓	A+	23	→ 75
47.	Hirmita Hiragonda	✓	✓	✓	✓	✓	A+	23	
48.	Samruddhi Kumbhar	✓	✓	✓	✓	✓	A+	23	
49.	Sanbodi Kamble	✓	✓	✓	✓	✓	A	20	→ 65
50.	Darshan Hegale	✓	✓	✓	✓	✓	B	20	15
	Apurva Kumbhar	✓		✓	✓	✓	B	15	
	Chakshita Kadam	✓	✓	✓	✓	✓	B	15	

23/30

classmate

Date

Page

Name :- Nirmita Laxman Hinogond

Roll No :- 1825

Subject :- python.

Q1) Explain Datatypes in python with example

Q2) write a note on types of function in python with example

Q3) what is a string explain built in method of string

Q4)

Datatype in python

Datatype are to the python. there are 6 datatypes in python.

1) integer datatype } numeric datatype.

2) Float datatype

3) String datatype (str):

4) mapping datatype :- complete Dictionary

5) Boolean datatype

6) Set datatype

7) complex datatype } numeric datatype.

1) integer datatype.

integer data type are used to the store integer value.

eg:- a = 10
print(a)

2) Float datatype:-

Float datatype are used to the Decimal numbers

Name- vaishnavi Ravindra Kamble.

subject- python

Roll No - 1371

Date- 10/07/2025

22/30

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Date

Page

Q.1 Explain datatypes in python with examples.

Q.2 Write a note on types of functions in python with examples.

Q.3 What is String explain Built-in methods of strings.

→ Q.3	Method	Description	Example
1)	title ()	It returns string with 1 st letter of every word in the string. In the upper case & the rest part in lower case.	str1 = "vck hello" print(str1.title()) o/p → Vck Hello
2)	lower ()	It returns string with all upper case letter convert into lowercase	str1 = "HELLO" print(str1.lower()) o/p → hello.
3)	upper ()	It returns string with all lower case letter convert into upper case.	str1 = "hello" print(str1.upper()) o/p → HELLO
4)	Count (str, start, end)	It returns number of time a substring str occurs in a given string.	str1 = "hello all hello hello" str1.count("hello") → 3 str1.count("hello,5,15") → 1
5)	Find (str, start, end)	It returns a first occurs of index of substring str occurring in a given string	str1 = "hello all hello hello" str1.find("all") → 6 str1.find("all",5,16) → 10
6)	ends with()	It returns the true the given string ends with the supplied substring otherwise return false.	str1 = "hello vck students" print(str1)

- 1] Explain Data types in Python with example
- 2] Write a note on types of function in python with example
- 3] What String, Explain built in methods.

Ans 1] Data Types in Python are used to store the specific data of a program. It can be alphabet, numeric, etc.

i] int -

It's an integer datatype which stores integer numeric values in it.

Exp.

```
num = int(input("Enter one number:"))
print(num)
```

O/P → Enter one number = 123 // input taken as integer

123

ii] Float -

It stores the decimal numeric values in it, after decimal only 2 digits are stored.

Exp.

```
n1 = float(input("Enter first value with decimal:"))
n2 = float(input("Enter second value with decimal:"))
print("First Value:", n1)
print("Second Value:", n2)
```

O/P → Enter first value with decimal: 26.043

Enter second value with decimal: 49.690

First Value: 26.04

Second Value: 49.69





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