

Vidya Vikas Mandal's  
Ramacrisna Madeva Salgaocar Higher Secondary School  
Margao Goa

Preliminary Exam, January, 2024

Std: **XII Computer Technique**

Maximum Marks : **50**

Date **23/01/2024**

Sub: **SOFTWARE TECHNOLOGY**

No. of Question : **26**

Duration: **2 hours.**

Instructions :

- i. All questions are compulsory
  - ii. There are four sections in this question paper(A,B,C&D)
  - iii. In section A there are 10 MCQ questions of 1 mark each. Write the correct answer/options on the answer paper.
  - iv. Section B contains ten questions of 2 marks each.
  - v. Section C contains four questions of 3 marks each. Internal choice is provided for Q24.
  - vi. Section D contains two questions of 4 marks each. Internal choice is provided for Q26.
  - vii. Write the number of each question clearly on the answer book.
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**Section A**

**Question numbers from 1 to 10 carry 1 mark each.**

1. Which of the following character is used to give single line comment ?
  - !
  - //
  - #
  - \*\*
2. Which of the following item is not present in the function header
  - Function name
  - Return value
  - Def
  - Parameter list
3. How many times the following loop will be executed?  
i = 10  
while i > 2  
  print(i)
  - 8

- infinite
- 9
- 4

4. Which string method is used to change lowercase letters to uppercase letters.

- lower()
- capitalize()
- upper()
- len()

5. In which topology all devices share a single communication line or cable.

- Star
- Ring
- Mesh
- Bus

6. The transmission mode in which the data is transmitted in only one direction

- Multiplex
- Simplex
- Half duplex
- Full duplex

7. Which of the network connects within a building or campus.

- PAN
- LAN
- WAN
- MAN

8. The type of signals that are represented in binary form i.e. "0" and "1"

- Digital
- Wave
- Optical
- Analog

9. What is the output of the following python code

```
dic={'Jan':'January','Feb':'February','Mar':'March'}  
dic.clear()  
print(dic)
```

- Error
- {'Jan','Feb','Mar'}
- {'January','February','March'}
- {}

10. In this type of inheritance derived class inherits from one or more base classes

- multiple
- single
- multilevel
- Hierarchial

## Section B

**Question numbers from 11 to 20 carry 2 marks each.**

11. Explain with an example deletion of an item from an existing dictionary.
12. What is computer network? State two advantages of computer network.
13. Explain two features of peer to peer network.
14. Write the python code to create a tuple using build in function and add five customers name to it.
15. Briefly explain function overloading in Polymorphism.
16. Write two advantages of object oriented programming.
17. Explain data abstraction in Object Oriented Programming.
18. State different types of namespaces and explain any one.
19. What are class attributes and instance attributes ?
20. Briefly explain the concept of inheritance in python .

## Section C

**Question numbers from 21 to 24 carry 3 marks each.**

21. With a neat labelled diagram describe Ring Topology.
22. State and explain any three elements/components of data communication .
23. Write three differences between object oriented programming and procedural oriented programming.
24. Write a python program to input 5 students rollno and marks scored out of 100 and store it in students dictionary also output list of all students who have scored marks more than 60.



OR

24. Explain with example merging of two dictionaries in python.

**Section D**

**Question numbers from 25 to 26 carry 4 marks each.**

25. Python program to generate a dictionary that contains a number (between 1 and n) in the form (i, i\*i).

Sample Dictionary ( n = 5 ) :

Expected Output : {1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

also find the sum of keys

- 26 Write a python program to separate the given tuple in the following manner.

Example

Given Tuple T= (10,20,30,40,50,60,70)

Output

T1 = (10,30,50,70)

T2 = (10,20,30)

T3 = (40,50,60,70)

Also find the minimum value in the given tuple.

OR

- 26 . Write program in python to input two tuples , concatenate these tuples and sort the combined tuple.