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Std: XII VOC – CT First Term Exam, October, 2023
Date: 20/10/23 Subject : Software Technology

Duraton: 2 hr.
Marks: 40

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 9 questions of 1 mark each, Select the correct answer/option and write on the answer paper.
- iv. Section B contains 7 questions of 2 marks each.
- v. Section C contains 3 questions of 3 marks each.
- vi. Section D contains 3 question of 4 marks each. Answer any two
- vii. Write the number of each question clearly on the answer book.

SECTION A

Question numbers from 1 to 8 carry 1 mark each.

1. Which function returns true if the string is in lower case
 - upper()
 - lower()
 - isupper()
 - islower
2. Select the statement to exit the loop even if the while or for condition is true.
 - exit
 - break
 - quit
 - continue
3. How many times the following loop will be executed?

```
i = 5  
while i > 0  
    i = i - 1  
    print(i)
```

 - 5
 - 4
 - 3
 - infinite
4. Functions that we define to do certain specific task are called as
 - User defined functions
 - Library functions
 - Built in functions
 - None of the above.

5. Name the topology in which each node is connected to two adjacent nodes .
- Star
 - ring
 - Bus
 - Mesh
6. Signal that is continues wave form and changes soomthly over a time
- digital
 - Active
 - Wave
 - Analog
7. The network architecture of personal computers where each computer acts as client and server
- server
 - peer to peer
 - cloud
 - hybrid
8. What is the output of the following python code
- ```
dic={'mon':'monday','tue':'tuesday','wed':'wednesday'}
print(dic.keys())
```
- ['monday', 'tuesday', 'wednesday']
  - dict\_keys(['mon', 'tue', 'wed'])
  - {Monday, 'tuesday', 'wednesday'}
  - { }
9. What is the output of the following python code
- ```
A={1:'one',2:'two',3:'three',4:'four'}
del A[2]
print(A)
```
- {1:'one',2:'two',3:'three',4:'four'}
 - {1:'one',3:'three',4:'four',2:'two',}
 - {1:'one',3:'three',4:'four'}
 - Error

SECTION B

Question numbers from 10 to 16 carry 2 marks each.

10. Explain the dictionary method clear() and give an example.
11. Explain giving example the addition of new element to an existing dictionary.
12. Explain update method in dictionary.
13. Explain any two elements/components of data communication.
14. Write two differences between MAN and WAN.
15. State different modes of data transmission and explain any one.
16. How does wired network differs from wireless network. Explain giving two points.

SECTION C

Question numbers from 17 to 19 carry 3 marks each.

17. Explain Client Server Network.
18. With neat labeled diagram describe Star topology
19. Write a python program using dictionaries to create a phonebook (name and phonenumber) . Input a name and delete a entry from the phonebook if it exists.

SECTION D

Question numbers from 20 to 22 carry 4 marks each.(answer any two)

20. Write a python program to input 5 students rollno marks scored out of 100 and store it in students dictionary also output list of all students who have scored marks more than 75.
21. Write the python program using dictionaries to input n employee number and names and display all information in ascending order based on their employee number.
22. 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 , sum of values and sum of keys and values