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**HALF-YEARLY EXAMINATION. (2022-23)**

**SUBJECT : INFORMATICS PRACTICES**

**CLASS : XI**

**Max. Marks : 70**

**Time Allowed : 3 hours**

**GENERAL INSTRUCTIONS:**

- This question paper contains five sections, Section A to E.
- All questions are compulsory.
- Section A have 18 questions carrying 01 mark each.
- Section B has 07 Very Short Answer type questions carrying 02 marks each.
- Section C has 05 Short Answer type questions carrying 03 marks each.
- Section D has 03 Long Answer type questions carrying 05 marks each.
- Section E has 02 Long Answer type questions carrying 04 marks each.
- All programming questions are to be answered using Python Language only.

**SECTION- A**

1. Which of the following is not an output device.
  - a) Dot matrix printer
  - b) VDU
  - c) Mouse
  - d) Plotter



2. In a SD card, the letters SD stands for.....
  - a) Secure Device
  - b) Secure Digital
  - c) Storage Device
  - d) Standard Device
3. .... is regarded as "Father of Computer".
  - a) Blaise Pascal
  - b) Charles Babbage
  - c) Lady Ada
  - d) John Napier
4. A set of programs is termed as:
  - a) Hardware
  - b) Firmware
  - c) Software
  - d) None of these
5. Which of the following converts a program from the high-level language to machine language.
  - a) Assembler
  - b) Compiler
  - c) Converter
  - d) Alternator
6. Which of the following is not appropriate for data security?
  - a) Using Password for user account or administrative account
  - b) By providing limited access to the computer system
  - c) By encrypting files
  - d) Opening unwanted email
7. The RAM stands for
  - a) Radial Access Memory
  - b) Random Access Memory
  - c) Roaming Access Memory
  - d) Real Access Memory
8. Computational Thinking means:
  - a) Thinking randomly
  - b) Thinking like a superman
  - c) Problem solving technique
  - d) None of these



- [P.T.O.]



15. Given is a nested list structure:

L = ["Computer", "Is", ["An", "Electronic"], "Device"]

Which of the following will access the string "Electronic"?

- a) L[2][1]
  - b) L[2][0]
  - c) L[1][2]
  - d) L[2]
16. A dictionary is a collection of:
- a) Sequence data
  - b) Ordered data
  - c) unordered data
  - d) Sorted data

**Assertion and Reason based questions:**

17. **Assertion (A):** The system software is a set of programs which takes care of all the activities of a computer system.

**Reason (R):** The system software is designed by the manufacturers in low level languages to serve as an interface between the user and the computer. It controls the various hardware and software components of a computer system.

Based on the above assertion and reasoning, choose an appropriate statement from the options given below:

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true and R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.

18. **Assertion (A):** The term bug is referred to as an error, a flaw or a fault in a computer program that causes an incorrect or unexpected result.

**Reason (R):** Debugging is the process of finding and resolving the errors to produce the desired result. It may happen that the program is running successfully but not producing the expected result.

Based on the above assertion and reasoning, choose an appropriate statement from the options given below:



- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false.
- d) A is false but R is true.

### SECTION-B

- 19. Differentiate between RAM and ROM.
- 20. Name three Specific purpose software used in a computer.
- 21. What are mutable and immutable data types in python? give examples of each.
- 22. Name two built-in mathematical functions of python module.
- 23. What will be the output of the following code?  

```
m, n = 2, 15  
for i in range (1,5):  
    m = m + 1  
    n = n - 1  
print ("m =", m)  
print ("n =", n)
```
- 24. Differentiate between len ( ) and count ( ) functions.
- 25. What happens if two keys in a dictionary have the same name?

### SECTION-C

- 26. What is an operating system? Write four functions of an operating system?
- 27. Distinguish between the interactive mode and script mode of Python programming.
- 28. Write a program to enter a number and display the sum of its digits.



Sample Input: 642,

Sample output: 12 ( $6+4+2 = 12$ )

29. What are Errors in Python? Explain all types of errors.
30. Write a Python code to input the name and phone number of n number of employees. Create a dictionary 'Name\_Phone' to contain key and value as name and phone number of the employees, respectively. Display the key-value pairs in ascending order of the names.

#### SECTION-D

31. Anita is facing difficulties in predicting the output for some of the code snippets while going through her textbook. Help her to sort out her problem. Predict the missing outputs:
- a) 

```
for a in range (5):  
    print (a)
```
  - b) 

```
for a in range (5, 0):  
    print (a)
```
  - c) 

```
for a in range (-10, 0, 2):  
    print (a)
```
  - d) 

```
for i in "PYTHON":  
    print ( i )
```
  - e) 

```
for i in range(-1, 10):  
    print (i +1)
```
32. Find the errors in the following code snippets:
- a) 

```
Lst = [5, 8, 12, 19]  
val = Lst + Lst  
print (val)
```
  - b) 

```
Lst = ['a', 'b', 'c', 'd']  
c = Lst [4]  
p = Lst [-6]
```



- c) `Lst = [1, 2, 3, 4, 5]`  
`t = Lst * 2`  
`print (t)`
- d) `L1 = ["amit", "sumit", "amar", "vijay"]`  
`L1 [3:1]`  
`L1 [:5]`  
`L1[-1 : -2: -3: -4]`
- e) `L1 = [1, [2, 3, 4, 5], 6]`  
`L1. append (9,10)`  
`L1. extend (45)`  
`L1. index (3)`

33. Given below is a dictionary:

`Dct={1:50, "Name": "Sumit", 2: (4,5), (1,3) : "Tuple", 3:[7,9]}`

With reference to the above dictionary, write a statement/ function to perform the following tasks:

- To access the value of key "Name"
- To access all the keys of the dictionary.
- To insert a key-value pair as "Salary"
- To delete a key-value pair (2: (4,5))
- To update the value of key (1) with 100.

### SECTION-E

34. A library charges fine for returning a book after the due date, as per the conditions given below:

No. of days	Fine
For the first ten days	40 paise per day
Eleven to twenty days	60 paise per day
More than twenty days	80 paise per day



The librarian has created a code in Python to calculate the fine based on the above conditions. But due to confusion, she could not complete some of the statements properly. The places that could not be completed are marked with ?1?, ?2?, ?3? and ?4? as shown below:

```
n = ?1? (input("Enter the number of days"))
```

```
if n <= 10:
```

```
    fine = ?2?
```

```
if n > 10 and n <= 20:
```

```
    fine = n* 0.60
```

```
if ?3? :
```

```
    fine = n* 0.80
```

```
print ("Fine to pay:", ?4?)
```

with reference to the above code, answer the following questions:

- What will be the appropriate data type in place of ?1?
- What will be the appropriate expression in place of ?2?
- What will be the appropriate condition in place of ?3?
- What will be appropriate variable to be written in place of ?4?

35. Two lists are shown below:

```
L1 = ['a', 'e', 'i', 'o', 'u']
```

```
L2 = [12, 13, 14]
```

Predict the output in the following code snippets:

a) 

```
L3 = L1. extend (L2)
```

```
print (L3)
```

b) 

```
L3 = L1 [1: 4] + L2 [: :]
```

```
print (L3)
```

c) 

```
del L1 [1:3]
```

```
print (L1)
```

d) 

```
print (13 not in 'L2')
```

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