

HALF YEARLY EXAMINATION, 2024-25

INFORMATICS PRACTICES

Time –3:00 Hrs.

Class – XI

M.M. : 70

Date – 12.09.2024 (Thursday)

Name of the student _____ Section _____

General Instructions:

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

SECTION - A

- Q1 Which smaller unit of the CPU chip directs and coordinates all activities within it and determines the sequence in which instructions are executed, sending instructions sequence to other smaller unit.
- a. CU b. ALU c. Processor d. All of these
- Q2 A disk defragmenter is an example of
- a. Application software b. Language processor c. Utility software d. None of these
- Q3 Which of the following makes available its source code?
- a. Freeware b. Proprietary software c. OSS d. Customised software
- Q4 Python code can run on a variety of platforms, it means python is a _____ language.
- a. Graphical b. Cross-platform c. independent d. all of these
- Q5 Which of the following is a keyword?
- a. name b. Print c. while d. Input
- Q6 To convert the read value through input() into integer type, _____() is used.
- a. floating b. float c. int d. integer
- Q7 What is the value of the expression 100 / 25?
- a. 4 b. 4.0 c. 2.5 d. None of these
- Q8 What is the value of the expression 100 // 25?
- a. 4 b. 4.0 c. 2.5 d. None of these
- Q9 What is the value of the expression 10 + 3 ** 3*2?
- a. 28 b. 739 c. 829 d. 64

- Q10 What is the value of the expression $17\%5$?
- a. 0 b. 1 c. 2 d. 5
- Q11 _____ is used for multiline comments in python.
- a. \$ b. "" c. @ d. %
- Q12 What does the following python program display?
- ```
x=3
if x == 0:
 print("Am I here?",end=' ')
elif x == 3:
 print("Or here?",end=' ')
else:
 pass
print("Or over here?")
```
- a. Am I here?      b. Or here?      c. Am I here? Or here?      d. Or here? Or over here?
- Q13 Function `range(3)` is equivalent to:
- a. `range(1,3)`      b. `range(3,0)`      c. `range(0,3,1)`      d. `range(1,3,0)`
- Q14 Function `range(10,5,2)` will yield an iterable sequence like:
- a. []                      b. [10,8,6]                      c. [2,5,8]                      d. [8,5,2]
- Q15 Consider the loop given below:
- ```
for i in range(-5):
    print(i)
```
- How many times will this loop run?
- a. 5 b. 0 c. infinite d. error
- Q16 If `L=[1,2]` then `L*2` will yield.
- a. `[1,2] * 2` b. `[1,2,2]` c. `[1,1,2,2]` d. `[1,2,1,2]`
- Q17 If `L1=[1,3,5]` and `L2=[2,4,6]`, then `L1+L2` will yield.
- a. `[1,2,3,4,5,6]` b. `[1,3,5,2,4,6]` c. `[3,7,11]` d. `[1,3,5]`
- Q18 Given a list `L=[10,20,30,40,50,60,70]`, what would `L[-4:-1]` return?
- a. `[20, 30, 40]` b. `[30, 40, 50]` c. `[40,50,60]` d. `[50,60,70]`

SECTION - B

- Q19 What is data retrieval? Which aspect of data retrieval affects the system performance?

OR

What is the function of memory? What are its measuring units?

- Q20 Describe the terms '**free software**' and '**open source software**'.

Q21 What is the difference between interactive mode and script mode in Python?

Q22 What will be the output produced by the following code fragments?

```
first=2
second=3
third=first*second
print(first,second,third)
first=first+second+third
third=second*first
print(first,second,third)
```

Q23 Explain any two math module functions of python.

Q24 What is the output produced when this code executes?

```
a=0
for i in range(4,8):
    if i % 2 == 0:
        a = a + i
print(a)
```

Q25 Give python code to accept 5 list elements and calculate sum.

SECTION - C

Q26 Differentiate between 'proprietary software' and 'freeware software'.

Q27 A triangle has three sides a, b, c as 17, 23, 30. Calculate and display its area using Heron's formula as

$$s = \frac{a+b+c}{2}; \text{ Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

Q28 Write a Python code to add the odd numbers up to (and including) a given value N and print the result.

Q29 Write a Python program to find those numbers which are divisible by 7 as well as by 5, between 500 and 700 (both included).

Q30 Give python code to accept 10 integer elements of a list and perform the following tasks:

- delete the 5th element.
- change the second elements value to 80.
- display the updated list.

OR

Give python code to accept 10 integer elements of a list and perform the following tasks:

- sort the elements.
- add an integer at the end of the list.
- display the updated list.

SECTION – D

Q31 Give Python code to print Fibonacci series' upto 20 elements. Some initial elements of a Fibonacci series are:

0 1 1 2 3 5 8

Q32 Give Python code to accept 10 integer elements and calculate the sum of even numbers and odd numbers separately.

OR

Give python code to accept two different lists and calculate the sum and average of the both the lists combined together.

SECTION - E

Q33 Give Python code to accept percentage and display grade based on following criteria.

Percentage Range	Grade
80 - 100	A
60 – 79.99	B
40 – 59.99	C
Below 40	D

Q34 Give Python code to accept any integer and calculate sum of its digits. Ex: 356 Output: 14

OR

Differentiate between for loop and while loop. Give example code for each

Q35 Give python to accept 10 integer elements of a list, the value to be searched and count the number of occurrences in the list.

Ex: Input

Enter 10 integers in list format: [1, 10, 20, 30, 10, 18, 10, 23, 5, 6]

Enter the value to be searched: 10

Output:

No of occurrences : 3

OR

Differentiate between sort() and sorted() methods of list with syntax and an example.

