Half Yearly Examination (2022-23)

Class : XI   **Subject :Informatics Practice**   **Marks : 70**
Date :23/09/2022   **Set-B**   **Duration:3 hrs.**

General Instructions:
1. This question paper contains two parts A and B. Each part is compulsory.
2. Part-A has 2 sections:
   a. Section – I has 21 multiple choice questions.
   b. Section – II has 14 questions, to be answered in one word or one line.
3. Part - B is Descriptive Paper.
4. Part- B has three sections
   a. Section-I is short answer questions of 2 marks each in which two questions have internal options.
   b. Section-II is long answer questions of 3 marks each in which two questions have internal options.
   c. Section-III is very long answer questions of 5 marks each in which two questions have internal options.
5. All programming questions are to be answered using Python Language only.

PART – A
SECTION – I

- Select the most appropriate option out of the options given for each question.   [21 x 1 = 21]

1. A Corel Draw 11 is an example of _____.
   (a) Application software   (c) System software
   (b) Utility software   (d) None of these

2. From the following which statement is not ture?
   (a) A Compiler converts HLL program into machine language line by line.
   (b) An Interpreter converts HLL program into machine language line by line.
   (c) Both (a) and (b) are true.
   (d) (a) is true and (b) is false.

3. OSS stands for:
   (a) Open System Service   (b) Open Source Software
   (b) Open System Software   (d) Open Synchronized Software

4. Select the correct statement about Dot matrix printer:
   (i) prints an entire line at time   (ii) is a impact printer
   (iii) is a non impact printer   (iv) prints one character at a time
   (a) i and ii   (b) i and iii   (c) ii and iv   (d) ii and iii

5. _____ is an example of open source software.
   (a) Linux   (b) Windows NT   (c) ios   (d) None of these

6. Component of CPU which is responsible for comparing the contents of two pieces of data is
   (a) ALU   (b) CU   (c) CPU   (d) Input Unit

7. Flash memory is a type of _____ memory.
   (a) Primary   (b) RAM   (c) Secondary   (d) All of these

8. Identify the invalid keyword below.

(a) and   (b) as   (c) while   (d) until

9. To give a different separator with print( ) _____ argument is used.

(a) Sep   (b) sep   (c) end   (d) separator

10. Which of the following is not an immutable type in Python?

(a) string   (b) tuples   (c) float   (d) dictionary

11. What value does the following expression evaluate to?

   $2 + 9 * ((3 * 12) - 8) / 10$

(a) 27   (b) 27.2   (c) 30.8   (d) None of these

12. What will be the output of the expression?

   10 or 0

(a) 0   (b) 1   (c) 10   (d) True

13. **Choose correct option :**

   S1='python'

   S1[0]=S1[0].upper()

   Statement 1: Above code will generate error.

   Statement 2: String is mutable by nature.

   (a) Only Statement 1 is true.

   (b) Only Statement 2 is true.

   (c) Both Statement 1 and 2 are true, but Statement 2 is not the correct reasoning of Statement 1.

   (d) Both Statement 1 and 2 are true, but Statement 2 is the correct reasoning of Statement 1.

14. **Choose correct option :**

   X=23**2**

   Statement 1: Order of execution of Multiple Power operators in an expression is Left to Right.

   Statement 2: Value of X will be 512.

   (a) Only Statement 1 is true.

   (b) Only Statement 2 is true.

   (c) Both Statement 1 and 2 are true, but Statement 2 is not correct reasoning of Statement 1.

   (d) Both Statement 1 and 2 are true, but Statement 2 is correct reasoning of Statement 1.

15. **(A) Assertion**

   L=[12,20,34,56,78] and **L2 = 23** then

   print(L1.extend(L2)) will give an error.

   (R) Reason : L2 is an integer type of identifier so extend() function won't work.

   (a) A is true but R is false

   (b) A is true and R is correct explanation of A

   (c) A and B both are false

   (d) A is false and R is correct

16. What will be the output of the given program segment?

```
for I in range(10, 1, 1):
            print(I)
print(I)
```

(a) 10   (b) 9   (c) Error   (d) None of the above

17. 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,[2,4,6]]

18. Given a list L=[10,20,30,40,50,60,70] what would L[-3:99] return ?

(a) [20,30,40]   (b) [30,40,50]   (c) [40,50,60]   (d) [50,60,70]

19. What gets printed ?

Names=['Hasan' , 'Ali', 'Balwant' , 'Sean' , 'Din']

print(Names[-1][-3])

(a) H   (b) D   (c) Has   (d) Din

20. Which of the following can delete an element from a list?

(a) pop( )   (b) remove( )   (c) del   (d) All of these

21. To increase the value of X five times using an augmented assignment operator, the correct expression will be

(a) X+=5   (b) X*=5   (c) X=X**5   (d) None of these

SECTION-II

Each question carries 1 mark.

22. What is Data retrieval?

23. What is RAM?

24. Define Open Source software.

25. Convert the following into bytes:

(a) 2 MB   (b) 3.7 GB

26. What will be the output of the following statements?

(a) bool ('0') and 10 < 11

(b) type (14 % 4)

27. What are operators?

28. Correct the following program so that it displays 33 when 30 is input.

val= input("Enter a value :")

nval=val +3

print(nval)

29. If you give the following for str1 = 'Hello' , why does Python report error?

str1[2]= 'P'

30. What is the use of range() function? What would range(3,13) return?

31. What is the difference between if……else and if ….. elif ….. else statement?

32. What is the difference between following expressions,

    (a) 3 or len(3)   (b) len(3) or   3

33. Predict the output:

    a, b ,c = [1,2] , [1,2] , [1,2]

    print(a == b)

    print(a is b)

34. Name the function which is used to insert value at the end of the list.

35. Why are lists called mutable types?

PART – B
SECTION – I

Each question carries 2 marks.

36. What is the function of CPU in a computer system? What are its sub units? Explain.

37. What is the difference between an expression and a statement in Python?

38. What is the output of the following code? How many times is the condition of if clause evaluated?

```
for i  in range (4):
        for j  in range(5) :
                if i+1 == j   or   j+i == 4 :
                    print("+",end=' ' )
```

39. What is the difference between sort() and sorted( )?

40. What does each of the following expressions evaluate to ?

    Suppose that L is the list

    ["These" , ["are" , "a" , ":few", "words"] , "that" , "we" , "will" , "use"]

    (a) L[1] [0: : 2]   (b) L[:1] + L[1]

    (c) L[2 : :2]   (d) "a" in L[1][0]

SECTION – II

Each question carries 3 marks.

41. Differentiate between proprietary software and freeware software. Name of two softwares of each type.

42. Create the following lists using a for loop:

    (A) A list containing the cubes of integers 1 through 25.

(B) The list ['a' , 'aa', 'aaa' , 'aaaa' , ………] that ends with 26 copies of the letter a.

43. Predict the output of the following code fragments:

(a) for x in [1,2,3] :
          for y in [4, 5 ,6] :
             print(x,y)

(b) for x in range(3) :
          for y in range (4) :
             print(x , y , x+y)

(c) c=0
    for x in range (10) :
          for y in range (5) :
             c+=1
    print(c)

44. Differentiate between pop( ) and remove( ) functions of list. Write examples for both.

45. Write following expressions in Python.

(1) $1/3\ b^2 h$ (2) $A = \pi r^2 h$ (3) $(x\text{-}h)^2 + (y\text{-}k)^2 = r^2$

SECTION – III
Each question carries 5 marks. Attempt any 2 questions from this section.

46. Carefully go through the code given below and answer the questions based on it

```
L=[ 23, 45, 67 , 55]
print(L)
L._____([34,46])    #line1
L._____(55)           #line2
print(34 not in L)       #line3
L1=L
print(L+L1)              #line4
L1=L*2
print(L1)                #line5
```

1. Choose the correct option from the following to fill the blank in line 1.
A.   extend( )   B. append( )   C. add( )   D. insert( )

2. Which of the following functions is used to delete an element from the list in line 2?
A.   pop ( )   B. del   C. remove( )   D. del( )

3. What will be the output of the expression given in line 3?
A.   No Output   B. False   C. True   D. Error

4. What will be the output of the expression given in line 4?
A.   [23,45,67,55]   C. [23,45,67,34,46, 23,45,67,34,46]

B.   [23,45,67,34,46]   D. None

5. What will be the output of the expression given in line 5?
A.[23,45,67,55]   C. [23, 34, 55, 67, 23, 34, 55, 67]
B. [23,45,67,55,34]   D. [23, 23, 34, 34, 55, 55, 67, 67]

47. Write a menu driven program in Python which reads a name and total marks of student
from user and compute percentage and print name and grade for the student.

Above 90	A
70-90	B
55-70	C
33-55	D
Less than 33	Fail

48. Describe the following functions of list data type with example.

(A) extend( )   (B) remove ( )   (C) sorted( )   (D) append( )   (E) min( )