INDIAN SCHOOL SOHAR
TERM I EXAMINATION (2023-24)
INFORMATICS PRACTICES (065)

CLASS : XI **MAX. MARKS :70**
DATE : 28/09/2023 **TIME : 3 HOURS**

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 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

1. A _____ acts as temporary high speed area between memory and CPU thereby improving processing capabilities. **1**

a. ROM
b. HDD
c. Cache
d. SSD

2. Which component of the computer is responsible for temporarily storing thedata that the CPU is currently working with? **1**

a. Hard disk drive (HDD)
b. Random Access Memory (RAM)
c. Central Processing Unit (CPU)
d. Graphics Processing Unit (GPU)

3. What is the purpose of an operating system (OS) in a computer system? **1**

a. Block advertisements
b. Manage hardware resources and provide a user interface
c. Provide power to the computer
d. Protect the computer from viruses

4. What is the function of an output device in a computer system? **1**

a. To process data
b. To provide input to the user
c. To display or produce information to the user
d. To store data for future use

5. Python code can be executed in _____ operating systems? **1**

a. Windows
b. MacOS
c. Both (a) and (b)
d. None of these

6. A tuple data type hasit's values enclosed within _____. **1**

a. []
b. {}
c. ()
d. <>

7. Find the keyword from the following. **1**

a. int
b. Else
c. Float
d. While

8. _____ is an identifier that is used to represent a data item. **1**

a. Token
b. Statement
c. Variable
d. Expression

9. What is the result of the expression 3+2.0? **1**

a. 5
b. Type Error
c. '5'
d. 5.0

10. Which of the following data type(s) is/are used to store a collection of key-value pairs in Python? **1**

a. list
b. tuple
c. dictionary
d. both (a) and (b)

11. Which of the following is an example of valid a identifier in Python? **1**

a. 123identifier
b. _identifiers
c. "identifier"
d. 123-identifier

12. Which of the following error will result in abnormal termination of a program? **1**

a. Runtime
b. Compile time
c. Syntax
d. Semantic

13. The escape sequence to create a new line in Pythonis ____. **1**

a. '\n'
b. '\t'
c. '/n'
d. '/t'

14. Correct the error in the statement: a+5=b **1**

a. a=+5b
b. b=+5a
c. 5b=a
d. b=a+5

15. Which of the following statement is the proper Python syntax for testing that the value of **a** is between 2 and 9? **1**

a. a>=2 and a<=9
b. 2<a<9
c. a>=2 or a<=9
d. 2>a>9

16. Which function is used to insert an element at a specified position in the list? **1**

a. insert()
b. extend()
c. add()
d. append()

Q17 and Q18 are ASSERTION AND REASONING based questions. Mark the correct choice as :

a. Both A and R are true and R is the correct explanation for A
b. Both A and R are true and R is not the correct explanation for A
c. A is True but R is False
d. A is False but R is True

17. Assertion (A) : Interpreters are generally slower than compilers in executing the code. **1**
Reasoning (R) : Interpreters translate and execute the code line by line, which can be slower than compilers that generate machine code in one go.

18. Assertion (A) :Python is dynamically typed. **1**
Reasoning (R) : The type of a variable is specified by the user and not determined automatically during runtime.

Section B

19. Explain '==' operator with an example. **2**

OR

List any two rules for naming an identifier.

20. Evaluate: **2**

a. 2 gb=____bytes
b. ____pb= 1024 tb

21. List any two advantages and disadvantages of Python. **2**

22. What is a comment in Python program? Explain the different ways in which comments can be included in a program. **2**

23. Write a short note on relational operators. **2**

24. Write the equivalent Python statement for the following expressions: **2**

i. $y=|a^3+b^2|2bc$

ii. $x=\frac{\sqrt{a^2+b^2}}{2ab}$

25. Write the code in Python to traverse the following list: **2**

L=[1,'abc',3]

Section C

26. Mr. Sam is trying to understand the use of loops in Python. Help him in writing a program to print the first 10 terms in Fibonacci series. **3**

OR

Write a program in Python to calculate the sum of the following series using while loop.
Series :1+11+111+1111.....+n terms.

27. A student of class XI is gathering information/facts on types of utility software. Help him/her by defining atleast 3 utility software with an example each. **3**

28. What is the return type of print()? Explain the use of **sep** and **end** attributes in print(). **3**

29. i. Write a program in Pythonto repeat the string "Good Morning" n times, here **n** is taken as user input. **3**

ii. Write a note on simple and compound statements in Python with an example each.

OR

i. Name the error that this statement would generate: **a=int('ten')**

ii. Define data retrieval and data recovery.

30. Evaluate the result of following expressions: **3**

i. 2//3*6+9/2-1

ii. not 6>7 and 8>3

iii. 'hi' and None or False

Section D

31. Ms Shreya is a novice in Python programming.She would like to know more about data type conversion. Help her in differentiating between implicit and explicit type conversion in Python with an example each. **4**

32. Answer the following: **4**

i. What will be the output of print(L.pop(1)), if L=[1,2,3,4,5]?

ii. If L=[1,2,3,4,5], then print(L.remove(1)) will display?

iii. Predict the output of the following code:

```
for i in 'class':
        print(i,end='$')
```

OR (only for part iii)

Predict the output of the following code:

```
for x in [1,2,3,4,5]:
        print(x*2,end='')
```

Section E

33. Write the corrected code for the following erroneous statements: **5**

i.
```
x=25.5
Print('x')
```

ii.
```
a=12
b = 2a
print(a b)
```

iii. i=1
While i<3
print('welcome')
i=i+1

iv. x = 23
4=x
x + = 2

v. if 5>3:
print('yes')
else = print('no')

OR

i. a, b, c=1, 2, 3
c, b, a = 2a, 2b, 2c
print(a; b; c)

ii. a='1'+10
print("a',a)

iii. x=input("x=")
y=x+2
print y

iv. x=5
if x=5:
print("yes")

v. a,b=10
print(A,B)

34. Priyanka is given a list as follows: **5**

colors=['black','white','pink','red','green']

She gives commands in succession to sort the list, add a new color 'blue' in the list and to remove the color'pink' from the list. Help her by filling the blanks and predicting the output of the code that follows.

colors=['black','white','pink','red','green']

_____ #She sorts the list in ascending order

_____# She adds the color blueto the end of the list

_____# She removes the color pink from the list

What is the output of the following code after the above operations?

```
for i in colors:
    if len(i)==4:
        print(i)    #predict the output
```

35. i. Write a program in Python to calculate the greatest of 3 numbers using **if..elif** statement. **5**

ii. What do you understand by the term 'immutable'?List the immutable data types in Python.

OR

i. Based on the table given below write a program in Python to input the sales amount, calculate the discount and print the final amount after discount:

Sales	Discount in %
<1000	2
1000-5000	5
>5000	7

ii. What do you understand by the term 'mutable'?List the mutable data types in Python.

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