



Delhi Public School, Howrah

PERIODIC TEST – II (2024 – 2025)

Class – XI

Care must be taken not to write anything on the question paper. All the questions must be attempted in the correct sequence.

SUBJECT: INFORMATICS PRACTICES (SUBJECT CODE 065)

THEORY EXAMINATION

Time Allowed:- 3 Hours

F.M.-70

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A, consists of 18 questions (1 to 18). Each question carries 1 Mark.
4. Section B, consists of 7 questions (19 to 25). Each question carries 2 Marks.
5. Section C, consists of 5 questions (26 to 30). Each question carries 3 Marks.
6. Section D, consists of 2 questions (31 to 32). Each question carries 4 Marks.
7. Section E, consists of 3 questions (33 to 35). Each question carries 5 Marks.
8. All programming questions are to be answered using Python Language only.

SECTION - A

1.	Choose the correct output for the following snippet: a = 3 ** 2 b = 2 ** 3 print(a) print(b) (a) 9 (b) 6 (c) 33 (d) 3 8 6 222 2	(1)
2.	By default in python, when you enter value as input, the input() function converts it into _____. (a) list (b) operator (c) string (d) float	(1)
3.	Ravi wants to run the following snippet into python compiler. But when he runs it, an error is being generated. Choose the correct option to identify the error. True=90 print [True] (a) 'print' statement should be 'Print' (b) 'print' statement should be with an object (c) The variable 'True' should be 'true' and print statement should be, print [true] (d) The variable 'True' should be of any other name as True is a keyword and print statement should be print (the corresponding variable name)	(1)
4.	The reserved words used by Python which have a special fixed meaning for the interpreter are termed as _____. a) Identifiers b) Keywords c) Literals (d) Data types	(1)
5.	Which of the following statement is correct? (a) in and not in are both logical operators. (b) in and not in are both identity operators. (c) in and not in are both membership operators. (d) in and not in are both relational operators.	(1)

6.	Choose the correct statement for the following code: a=b=9. (a) The code will assign 9 to both the variables a and b (b) The code will assign NULL to both the variables a and b (c) The code will assign an ERROR (d) The code will assign 9 to the variable b only	(1)
7.	Himadri wants to run a python program using range() function. Which of the following is true about the range() function? (a) range() function strictly adheres to both the initial and final limit as mentioned (b) range() function considers the initial value as mentioned and final value as final value minus one (c) range() function is applicable to both for and while loop (d) range() function values cannot be iterated using step value	(1)
8.	Single line comments in Python begins with _____ symbol. (a) # (b) " (c) ' (d) %	(1)
9.	Which of the following will be the most suited method to accept a list input from user? (a) int(input()) (b) str(input()) (c) float(input()) (d) eval(input())	(1)
10.	Choose the correct output for the following code: if True: print(101) else: print (202) a) True b) False c) 101 d) 202	(1)
11.	Which of the following is a syntactically correct string? a) 'she shouted 'hello' loudly b) "Goodbye" c) "This "course" is good" d) "This is great!"	(1)
12.	The list L1 contains [3, 4, 5, 6, 6, 8, 0]. What will be the output of the given expression? print (L1[-1]) a) 0 b) 3 c) 5 d) 8	(1)
13.	Given, x = ['c', 'o', 'm', 'p', 'u', 't', 'e', 'r'] What will be the output of the statement print (x[:5])? (a) ['c', 'o', 'm', 'p', 'u', 't'] (b) ['c', 'o', 'm', 'p', 'u'] (c) ['p', 'u', 't', 'e', 'r'] (d) ['o', 'm', 'p', 'u']	(1)
14.	Given A = "[22, 4.88, 'India', 'T']". The data type of A is: (a) List (b) Char (c) String (d) Boolean	(1)
15.	Consider the given statement: lst1 = [10, 20.5, "IP", ["IP", "EXAM"]]. What will be the output of print (len(lst1)) (a) 5 (b) 4 (c) 2 (d) 6	(1)
16.	What will be the output of the following operation? L1=[1, 2] L2=[3,4] (L1+L2)*2 (a) [2, 4, 6, 8] (b) [1, 2, 3, 4, 1, 2, 3, 4] (c) [8, 12] (d) [1, 1, 2, 2, 3, 3, 4, 4]	(1)
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 but 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): Indentation is a very important factor while writing a program in Python. Reason (R): Indentation refers to the spaces at the beginning of a code line. Multiple statements with the same indent are classified as a block of code.	(1)
18.	Assertion (A): List traversal in Python is done both through slicing as well as using loop. Reason (R): Traversal can be done only through forward indexing.	(1)
SECTION - B		
19.	What will be the output for the following: (a) if (9 < 0) and (0 < -9): print("hello") elif (9 > 0) or False:	(2)

	<pre> print("good") else: print("bad") (b) x, y, z = 5, 9, 14 if x + y==z: print('Not False') else: print('Not True') </pre> <p style="text-align: center;">OR</p> <p>Find error(s) in the following code and correct it by rewriting the code. Underline the corrections.</p> <pre> x = int(("Enter value for x: ")) for in range [0,11]: if x = y print (x+y) else: print (x-y) </pre>	
20.	<p>Jatin has written the following code that is constructed using for loop. He wants the code to be converted into a while loop construct. Help Jatin to rewrite the code.</p> <pre> for i in range(3): for j in range(2): print(i, j) </pre>	(2)
21.	<p>Expression and statement both are very useful in a python code. If you are a good programmer then you must use both of these in your block of code. State the importance of expression and statement in the python code.</p> <p style="text-align: center;">OR</p> <p>Based on the flow of execution, Python coding construct can constitute different types of statements. Explain (a) Sequential and (b) Iterative statements in brief.</p>	(2)
22.	<p>Explain and illustrate the concept of if-else statement with a suitable program snippet.</p>	(2)
23.	<p>Write a Python program to calculate the factorial of a user entered number.</p> <p>Sample input: Enter any number: 5 Output: Factorial of 5 is 120</p> <p style="text-align: center;">OR</p> <p>Write a python script to find the factors of a user entered number.</p>	(2)
24.	<p>A Python script is constructed with several tokens. Tokens are said to be the building blocks of a program. Explain the difference between the tokens – a keyword and an identifier.</p> <p style="text-align: center;">OR</p> <p>Sumedha is learning programming concepts where she learnt about the proper placement of the program statements. Violating the rules may lead to generation of certain errors. Explain the role of indentation in a Python code.</p>	(2)
25.	<p>What do you understand by traversing a list? Give an example.</p>	(2)
SECTION - C		
26.	<p>Predict the output of the following code:</p> <pre> x=0 for i in range (1,3): for j in range (1,i): z=i+j-1 if z%2==0: x=x+z elif z%3==0: x=x+z-2 print ("x=",x) </pre>	(3)

27.	Divas is a student of class XI and he recently shifted to the subject IP from another subject. Since he joined late in the IP class he missed few a lessons that covered the topics based on adding items to an existing list in Python. Define the term list to Divas. Also explain him the difference between append() and extend() methods of list using suitable program snippets.	(3)
28.	<p>Given L = ["abc", [6, 7, 8], 3, "mouse"]</p> <p>Consider the above list and answer the following: (a) print (L[3:]) (b) print (L[: : 2]) (c) print(L[1] [1])</p> <p style="text-align: center;">OR</p> <p>Given below are statements for creating lists. Find the errors in the statements and rewrite the correct statements: (a) L1 = [[0, 1, 2, 3] ["my", "book"]] (b) L1 = [0, 1, 2, 3] [4, 5 [6, 7]] (c) L1 = (['a', 'b', 'c' [1, 2, 3, A])</p>	(3)
29.	<p>Gaurav's brother who studies in class X is going to participate in an interschool coding event. He was practicing some sample questions based on prediction of output from program snippets. Help Gaurav to predict the outputs for his brother.</p> <p>(a) a = [2, 7, 9, 13, 28] print (a[2 :] + a[: 2])</p> <p>(b) values = [[3, 4,, 5, 1], [33, 6, 1, 2]] for row in values: row.sort() for element on row: print (element, end= " ") print()</p>	(3)
30.	<p>Write a Python program to count the number of strings where the string length is 2 or more and the first and last characters are same from the given list of strings.</p> <p>Example: Sample List = ['abc', 'xyz', 'cbc', '121'] Expected Result: 2</p>	(3)

SECTION - D

31.	<p>Dinesh is dealing with Python programs that deal with creation of graphic patterns. Write a program in Python that will help Dinesh form the following pattern.</p> <pre> * *** ***** ***** ***** ***** </pre>	(4)
32.	<p>Prakash, an IP student of his school is preparing a quiz based game where he is manipulating a list containing the names of the states in India. He wants to extract the states whose names starts with the alphabet 'M' and display them. Write a Python script to display all the state names from a list of states which start with the alphabet M and help Prakash meet his target.</p> <p>Output should be: Enter the List: ["MP", "UP", "WB", "TN", "MH", "MZ", "DL", "BH", "RJ", "HR"] The states with letter M: MP MH MZ</p>	(4)

SECTION - E

33.	<p>Dhiraj is working on a Python program that is supposed to print the following pattern.</p> <pre> 1 1 2 1 2 3 1 2 3 4 1 2 3 4 5 1 2 3 4 5 6 </pre> <p>The program he has copied is not from a trusted source and hence not appropriate to generate the above mentioned output. The program should be as follows:</p> <pre> n = _____ #Line 1 for i in range(_____, _____): #Line 2 for j in range(_____, _____): #Line 3 print (j, end= "") #Line 4 </pre> <p>Fill in the gaps in Line 1, Line 2 and Line 3 in order to obtain the above output.</p>	(5)
34.	<p>Suresh is given the following incomplete Python script that takes an empty list, asks user the number of items to be inserted in the list, inserts the items and finally prints the maximum and the minimum values out of those items. Help Suresh by filling the gaps in the given script in order to obtain proper output.</p> <pre> lst= _____ #Statement 1 num = int(input("How many items to insert?")) for n in range (_____): #Statement 2 items = int(input("Enter item: ")) lst._____ (items) #Statement 3 print ("Maximum element in the list is: ", _____) #statement 4 print ("Minimum element in the list is: ", _____) #Statement 5 </pre> <p>(a) Fill the gap in #Statement 1 to create an empty list. (b) Fill the gap in #Statement 2 to run the loop desired number of times. (c) Sate the suitable function in #Statement 3 to insert items to the empty list. (d) Complete the print statements in #Statement 4 and #Statement 5 to print the maximum and minimum item in the list.</p>	(5)
35.	<p>The Coders Institution is a programming academy that focuses on special numbers that helps students to understand concepts in a better way. Being a senior programmer, you have taken responsibility to develop a program to help students differentiate between normal numbers and Armstrong numbers. Make sure that you perform a careful analysis on Armstrong number. Write a Python program that accepts a number and check if the user given number is Armstrong number or not.</p> <p>[Logic of Armstrong number with example: 153 is an Armstrong number because $1^3 + 5^3 + 3^3 = 153$. 370 is an Armstrong number because $3^3 + 7^3 + 0^3 = 370$.]</p> <p style="text-align: center;">OR</p> <p>Manoj a student of class XI came to know about Krishnamurthy number when he was preparing for a competitive examination. He learnt that Krishnamurthy Number is a number which is equal to the sum of the factorials of all its digits.</p> <p>Write a python program that consider one input from user and check whether it is a Krishnamurthy number or not. For example $145 = 1! + 4! + 5! = 1 + 24 + 120 = 145$</p>	(5)