



Delhi Public School, Howrah

PAll Examination (2025-2026)
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 (CODE-065)

THEORY EXAMINATION

Max.Time Allowed: 3hours

Max. Marks:70

General Instructions:

- All questions are compulsory.
- The examination paper contains five sections, from Section A to Section E.
- Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.
- Section B consists of 7 questions (22 to 28). Each question carries 2 Marks.
- Section C consists of 4 questions (29 to 32). Each question carries 3 Marks.
- Section D consists of 2 questions (33 to 34). Each question carries 4 Marks.
- Section E consists of 3 questions (35 to 37). Each question carries 5 Marks.
- There is no overall choice. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions.
- All programming questions are to be answered using Python Language only.
- In case of MCQ, text of the correct answer should also be written.

Section-A (21 x 1 = 21 Marks)

- 1 Consider the code. Identify the output: 1
for l in range (5, 0, -2):
print(l)
(A) 543210-1 (B) 543210 (C) 331 (D) None of the above
- 2 Which of the following is a valid “for loop” in Python? 1
(A) for(i=0; i < n; i++) (B) for i in range(0,5): (C) for i in range(0, 5) (D) for i in range(5)
- 3 The device capable of recognizing a pre-specified type of mark made with dark pencil or ink is _____. 1
(A) OCR (B) OMR (C) MICR (D) Barcode reader
- 4 Recently used data are kept in _____memory. 1
(A) RAM (B) Hard Disk (C) Cache (D) ROM
- 5 Consider L= (2, 3, 4). 1
What is the output of print(L*2)?
(A) (2,3,4),(2,3,4) (B) (2,3,4,2,3,4) (C) (2,2,3,3,4,4) (D) error
- 6 D1={1: 'India', 2: 'Russia', 3: 'World'} 1
D2={'School': 'EOIS', 'Place': 'Moscow'}
print(D1.update(D2))
Write the output of the above code:
(A) None (B) {1: 'India', 2: 'Russia', 3: 'World', 'School': 'EOIS', 'Place': 'Moscow'}
(C) Error (D) {1: 'India', 2: 'Russia'}

- 7 For the given list L = [10, 20, 30, 40, 50, 60, 70] what would L[1/4] return? 1
(A) [10, 20, 30, 40] (B) [20, 30, 40, 50] (C) [20, 30, 40] (D) Error
- 8 What will be the output of the following Python code? 1
>>>6*3+4**2//5-8
(A) 14 (B) Error (C) None (D) 13
- 9 To find the last element of list namely 'smiles' in Python, _____ will be used. 1
(A) smiles[0] (B) smiles[-1] (C) smiles[lpos] (D) smiles[:-1]
- 10 Choose an invalid statement from the following : 1
(A) a=b=c-20 (B) a, b, c 10,20,30 (C) a_b_c=20 (D) abc 20 30 40
- 11 For the list L = [10, 20, [30,20,50], 40, [50, 60], 70] , what would L[2][-2]return ? 1
(A) [20, 30] (B) [30,20,50] (C) 20 (D) [30, 40, 50]
- 12 Which of the following operators can be used with a list? 1
(A) in (B) Both (A) & (C) (C) not in (D) Arithmetic Operators only
- 13 Identify the correct syntax to copy one list into another. 1
(A) listA= listB[] (B) listA= listB[:] (C) listA = listB[]() (D) listA= list ()listB()
- 14 Select the following statement(s), that will terminate only the current pass of the loop and proceed 1
with the next iteration of the loop.
(A) pass (B) break (C) continue (D) goto
- 15 The commands that will create a list, is_____. 1
(A) list1 = list()
(B) list1 = ()
(C) list1 = list([1, 2, 3])
(D) A and C only
- 16 What values are generated when the function range(6, 0, -2) is executed ? 1
(A) [4, 2] (B) [4, 2, 0] (C) [6, 4, 2] (D) [6, 4, 2, 0]
- 17 Find an invalid loop from the following in Python. 1
(i) for (ii) while (iii) do-while (iv) if-else
(A) i only (B) iii and iv only (C) ii and iv only (D) iii only
- 18 What is the output of the following code? 1
l= [None] *10
print(len(l))
(A) 10 (B) 0 (C) Syntax Error (D) None
- 19 Tuli executes the provided code in a Python editor. What output will be displayed on her screen? 1
names = ['Hasan', 'Balwant', 'Sean', 'Dia']
print(names[-1][-1])
(A) a (B) n (C) Hasan (D) Dia

Q-20 and Q-21 are Assertion (A) and Reason (R) Type questions. Choose the correct option as:

- (A) Both A and R are True, and R correctly explains A.
(B) Both A and R are True, but R does not correctly explain A.
(C) A is True, but R is False.
(D) A is False, but R is True.

- 20 **Assertion (A):** The data type of a variable is declared as per the type of value assigned to it. 1
Reason (R): Python exhibits the feature of dynamic typing. In dynamic typing, the type of the variable is determined only during runtime.
- 21 **Assertion (A):** The position of each element in the list, considered as its index. 1
Reason (R): Indexing in a list can be positive and negative; index is defined using [] brackets.
- Section-B (7X2 = 14 Marks)**
- 22 (A) What will be the output of the following code? 2
- ```
p=10
q=20
p*=q/2
q+=p+q*2
print('p=',p)
print('q=',q)
```
- OR**
- (B) What will be the output of the following code?
- ```
for num in range(2,10,2):
    s=0
    print(num,end="")
    s=s+num
print("sum=",s)
```
- 23 Aritro is unfamiliar with the concept of operators, which is essential for his math project that involves unary operators. Help him to understand about unary operators by explaining it with a suitable example. 2
- 24 Fill in the blanks to complete the block of code in python to check if the maximum element of the list lies in the first half or the second half. 2
- Sample Output:
Enter a list: [6, 8, 11, 6, 12, 7, 16]
The maximum element 16 lies in the 2nd half.
- ```
Lst=eval(_____("Enter a list:"))
Ln= _____(Lst)
Mx = max(Lst)
ind=Lst._____(Mx)
if ind _____(Ln/ 2):
 print("The maximum element", Mx, "lies in the 1st half.")
else:
 print("The maximum element", Mx, "lies in the 2nd half.")
```
- 25 (A) Create a Python program that generates a sequence starting from -5 and increasing by 5 up to a user-defined integer n. You can prompt the user for input and then utilize a loop to produce the desired output. 2
- Example:  
Sequence:- 5, 10, 15, 20, 25, up to n, where n is an integer input by the user.  
Sample Output:  
Enter limit: 38  
-5 10 -15 20 -25 30 -35
- OR**
- (B) Develop a Python program that calculates the sum of the digits of an integer provided by the user. The program should prompt the user for input, process the integer and print the output

as per instructions given.

Sample Output:

Enter number: 321

Sum of digits of number 321 is: 6

- 26 Identify and correct the mistakes in the following code block designed to determine whether the year entered by the user is a leap year or not. 2

```
yr = int(("Enter a 4-digit year :"))
if yr % 100 == 0:
 if yr % 400 == 1:
 leap = True
 else:
 leap = False
else yr % 4 == 0:
 leap == True
else:
 leap = False
if leap == True :
 print(yr, "is a leap year")
else:
 print(yr, "is not a leap year")
```

- 27 Determine the output produced by the following segment of code: 2

```
n = 5
s = 0
for i in range (n, 0, - 1) :
 for j in range (1, s + 1):
 print(end = "")
 for j in range(1, i + 1) :
 print(j, end = " ")
 s +=2
print()
```

- 28 (A) Create Python expressions for the formulas given below. 2

(i)

$$\frac{\sqrt[3]{5x^2 + y}}{\sqrt[4]{x+1} y^3}$$

(ii)

$$\frac{-b + \sqrt{b^2 - 4a}}{2a}$$

OR

- (B) The data that needs to be processed by a computer can be in various form. It can be numbers with or without decimal places or it can be just a single character or a sequence of characters. The data to be handled by the computer can also be in group. All computer programming languages support wide variety of data that can be stored, processed and manipulated in a computer system. 'Data type is a term that is used to show the kind of data values or the type of data that is expected to be handled.'

Python has five standard data types: Numbers, Strings, Lists, Tuples and Dictionary.

Based on the above information, answer the following questions.

(i) Which data type contains only numeric value in Python?

- (a) List      (b) Tuple      (c) Numbers      (d) String

(ii) Tuples are defined by \_\_\_\_\_.

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

**Section-C (4X3 = 12 Marks)**

- 29 Write a Python program that identifies prime numbers within the range of 15 to 25. 3
- 30 To create a Python script that outputs the first 20 elements of the Fibonacci series, Chandrima can start by defining the initial values of the series, which are 0 and 1. The subsequent numbers are generated by summing the two preceding numbers. By using a loop, she can iterate until she have printed the desired number of elements, resulting in a sequence that begins with 0, 1, 1, 2, 3, 5, 8, and so forth. This approach efficiently demonstrates the generation of the Fibonacci series in a concise manner. Write the script used by Chandrima. 3
- 31 `a = int(input("Enter an integer: "))  
b = int(input("Enter an integer: "))  
if a <= 0:  
 b = b + 1  
else:  
 a = a + 1  
if a > 0 and b > 0:  
 print("W")  
elif a > 0 :  
 print("X")  
if b > 0:  
 print("Y")  
else:  
 print("Z")` 3

**Consider the above code segment and answer the following questions:**

- (A) What letters will be printed if the user enters -1 for a and -1 for b?  
(i) Only W      (ii) Only X      (iii) Only Y      (iv) Only Z
- (B) What letters will be printed if the user enters 1 for a and 1 for b?  
(i) W and X      (ii) W and Y      (iii) X and Y      (iv) X and Z
- (C) What letters will be printed if the user enters 1 for a and 0 for b?  
(i) W and X      (ii) X and Y      (iii) Y and Z      (iv) X and Z
- 32 (A) To analyze the provided list, L = [20, 30, 40, 100], evaluate the outputs of three specific operations given below. 3  
(i) `print(L*2)`      (ii) `print(L[-2])`      (iii) `print(L.pop())`  
**OR**  
(B) Clarify the functions of the following list with examples:  
(i) `insert()`      (ii) `remove()`      (iii) `append()`

**Section-D (2X4 = 8 Marks)**

- 33 `cpwords = {"Soil": "Pollution", "Traffic": "Jam", "Air": "Purifier", "Play": "Ground"}` 4  
Find the output of the following statements:  
(A) `print(cpwords.get("Air"))`  
(B) `print("Play" in cpwords.keys())`  
(C) `print("ground" not in cpwords.values())`  
(D) `cpwords.update({"play": "Station"})`  
`print(cpwords)`  
(E) `del cpwords["Jam"]`

- 34 (A) Write a python program that takes a list of numbers as input and rearranges the elements by moving all zeros to the right while shifting all non-zero numbers to the left side of the list. 4

**OR**

- (B) Write Python statements to execute the following operations on a dictionary named "PTM".
- (i) To check whether the value "s1" is existing as the dictionary's values.
  - (ii) To remove the value 93 from the dictionary.
  - (iii) To add dictionary, d2={"s5" : 100, "s9": 97} with PTM.
  - (iv) To find the minimum value among the values of the dictionary.
  - (v) To add a key "s8" with value 74, if the key already exists then it should only update the value.

**Section-E (3X5 = 15 Marks)**

- 35 Write a Python program that takes the name of a month as input and outputs the corresponding number of days in that month. This functionality should utilize a predefined dictionary where the keys represent the names of the months and the values indicate the number of days associated with each month. 5
- 36 Develop a Python program that accepts a list from the user and identifies the second largest number within that list. The program should efficiently handle various input scenarios to ensure accurate results. 5
- 37 (A) Animesh and Suresh are tasked with resolving a block of code using the provided values: num1 equals 4, num2 is 3, and num3 is 2. Write the outputs for them based on these inputs. 5
- (A) num1+= num2 + num3 print (num1)
  - (B) num1 = num1 \*\* (num2 + num3)  
print (num1)
  - (C) num1 \*\*= num2 + num3
  - (D) num1 = "5" + "5" print (num1)
  - (E) print(4.00/(2.0+2.0))

**OR**

Soujanya and Nikita are tasked with resolving a block of code using the provided values: num1 equals 4, num2 is 3, and num3 is 2. Write the outputs for them based on these inputs.

- (A) num1 = 24 // 4 // 2  
print(num1)
- (B) num1 = float (10)  
print (num1)
- (C) num1 = int('3.14')  
print (num1)
- (D) print('Bye' == 'BYE')
- (E) print(10! = 9 and 20 > = 20)

