

**Pre Board III 2025-26**  
**Class XII**  
**Computer Science (083)**

**Time: 3Hrs**

**MM:70**

**General Instructions:**

- (i) This question paper contains four sections, Section A to D.
- (ii) All questions are compulsory.
- (iii) Section A have 22 questions (MCQs) carrying 1 mark each.
- (iv) Section B has 13 Very Short Answer type questions carrying 2 marks each.
- (v) Section C has 3 Short Answer type questions carrying 3 marks each.
- (vi) Section D has 2 Long Answer type questions carrying 4 marks each.
- (vii) Section E has 1 Long Answer type questions carrying 5 marks each.
- (viii) All programming questions are to be answered using Python Language only.

**Section - A**

Q No	Section-A (21 x 1 = 21 Marks)	Mrk
1	State if the following statement is True or False: Using the statistics module, the output of the below statements will be 20: import statistics statistics.median([10, 20, 10, 30, 10, 20, 30])	1
2	What will be the output of the following code? L = ["Python", "Java", "Basic"] print( L [1] [0] + L [2] [-1] ) a) JC                      b) Pa                      c) jc                      d) Jc	1
3	Consider the given expression: print(1919 or not 75>30) Which of the following will be the correct output of the given expression? a) True                      b) False                      c) Null                      d) None of these	1
4	Which of the following is not a category of SQL statements? a) DDL                      b) FCL                      c) DML                      d) TCL	1
5	What will be the output of the following Python code? str= "Computer Exam" print( str [ - 3 : : - 3 ] ) a) xruo                      b) xrou                      c) Eruo d) xru	1
6	Write the output of the following Python code : for k in range(7, 40, 6): print ( k + '-' ) a) TypeError                      b) No output                      c) Numbers from 7 to 39                      d) None of these	1
7	Identify the DML command from the following : a) UPDATE                      b) ALTER                      c) CREATE                      d) DROP	1
8	Which of the following is an invalid variable/identifier in Python: (A) my_day_2                      (B) 2nd_day                      (C) Day_two                      (D) _2	1
9	There could be only one _____ key in MYSQL database. a) alternate                      b) candidate                      c) primary                      d) all of these	1
10	Which of the following block is used for exception handling in Python: a) if – else                      b) for - else                      c) while                      d) try - except	1

11	<p>Find output of the following Python code:</p> <pre>data = {'apple': 10, 'banana': 20, 'orange': 30} keys_list = list(data.keys()) print(keys_list[1])</pre> <p>a) 20                      b) banana                                      c) 10                                      d) apple</p>	1
12	<p>What possible output is expected to be displayed on the screen at the time of execution of the Python program from the following code?</p> <pre>import random AR = [20,30,40,50,60,70] FROM = random.randint(1,3) TO = random.randint(2,4) for K in range(FROM,TO+1):     print (AR[K],end="# ")</pre> <p>(i) 10#40#70#                      (ii) 30#40#50#                                      (iii) 50#60#70#                                      (iv) 40#50#70#</p>	1
13	<p>What is the output of the following expression ?</p> <pre>Sports="Paralympic Games" print (Sports.split("m"))</pre> <p>(A) ['Paraly','m','pic Ga','m','es']                                      (B) ('Paraly','m','pic Games')</p> <p>(C) ('Paraly','pic Ga','es')                                      (D) ['Paraly', 'pic Ga', 'es']</p>	1
14	<p>Which SQL command can change the cardinality of an existing relation?</p> <p>a) Insert                                      b) Delete                                      c) Both a) &amp; b)                                      d) Drop</p>	1
15	<p>In SQL, a relation consists of 5 columns and 6 rows. If 2 columns and 3 rows are added to the existing relation, what will be the updated degree of a relation?</p> <p>a) Degree: 7                                      b) Degree: 8                                      c) Degree: 9                                      d) Degree: 6</p>	1
16	<p>Which operator tells whether an element is present in a sequence or not?</p> <p>a) exist                                      b) in                                      c) into                                      d) inside</p>	1
17	<p>What will be the output of the following code segment ?</p> <pre>p=list("Session 2024-25") print(p[10:20:])</pre>	1
18	<p>Assertion (A) : readlines() reads all the lines from a text file and returns the lines along with newline as a list of strings.</p> <p>Reasoning (R) : readline() can read the entire text file line by line without using any looping statements.</p> <p>(A) Both Assertion and reason are true and reason is correct explanation of assertion.  (B) Assertion and reason both are true but reason is not the correct explanation of assertion.  (C) Assertion is true, reason is false.  (D) Assertion is false, reason is true</p>	1
19	<p>Which of the following statements is not true for parameter passing to functions?</p> <p>(a) You can pass positional arguments in any order.  (b) You can pass keyword arguments in any order.  (c) You can call a function with positional and keyword arguments.  (d) Positional arguments must be before keyword arguments in a function call.</p>	1
20	<p>Assertion (A):- If the arguments in a function call statement match the number and order of arguments as defined in the function definition, such arguments are called positional arguments.</p> <p>Reasoning (R):- During a function call, the argument list first contains default argument(s) followed by positional argument(s).</p> <p>(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</p>	1

	(d) A is false but R is True	
21	The mode used for both writing and reading data from a binary file : a) wb+                      b) w                      c) wb                      d) a	1
22	Consider the following code and choose the correct output given below: n='5' try: print('WORD'+n, end="#") except: print('ERROR', end="#") finally: print('OVER') a) WORD5#                      b) WORD5#OVER                      c) ERROR#OVER                      d) ERROR#	1
<b>Section-B</b>		
23	<b>(a) Given is a Python string declaration :</b> NAME = "Learning Python is Fun" Write the output of : print(NAME[-5:-10:-1])  <b>(b) Write the output of the code given below :</b> dict1 = { 1 : ["Rohit",20], 2 : ["Siya",90] } dict2 = { 1 : ["Rahul",95], 5 : ["Rajan",80] } dict1.update(dict2) print(dict1.values())	2
24	Explain the difference between explicit and implicit type conversion in Python with a suitable example.  <b>OR</b> Write one example for each of the following in Python: (i) Syntax error (ii) Implicit type conversion	2
25	Differentiate between <b>IN</b> and <b>BETWEEN</b> operators in SQL with appropriate examples.	2
26	Explain the difference between break and continue statements in Python with a suitable example.	2
27	The code provided below is intended to remove the first and last characters of a given string and return the resulting string. However, there are syntax and logical errors in the code. Rewrite it after removing all the errors. Also, <b>underline</b> all the corrections made. define remove_first_last(str): if len(str) < 2: return str new_str = str [ 1 : -2 ] return new_str result = remove_first_last("Hello") Print ( "Resulting string: " result )	2
28	Nisha is assigned the task of maintaining the staff data of an organization. She has to store the details of the staff in the SQL table named <b>EMPLOYEES</b> with attributes as <b>EMPNO, NAME, DEPARTMENT, BASICSA</b> to store Employee's Identification Number, Name, Department, and Basic Salary respectively. There can be two or more Employees with the same name in the organization. <b>(i)</b> (a) Help Nisha to identify the attribute which should be designated as the PRIMARY KEY. Justify your answer.	2

	<p style="text-align: center;"><b>OR</b></p> <p>(b) Help Nisha to identify the constraint which should be applied to the attribute NAME such that the Employees' Names cannot be left empty or NULL while entering the records but can have duplicate values.</p> <p><b>(ii)</b> (a) Write the SQL command to show the details of employees whose basic salary is less than 80000.</p> <p style="text-align: center;"><b>OR</b></p> <p>(b) Write the SQL command to delete the table EMPLOYEES.</p>	
29	Differentiate between drop and delete query in SQL with a suitable example	2
30	Differentiate between text file and binary file.	2
	<p style="text-align: center;"><b>OR</b></p> <p>Differentiate between relative path and absolute path with example.</p>	
31	Difference between 'a' and 'w' modes i.e. append and write modes in Python.	2
	<p style="text-align: center;"><b>OR</b></p> <p>Difference between tell() and seek() functions in Python.</p>	
32	<p>Following is a simple Python program to write a list data into a binary file. Fill the missing statements.</p> <pre>import _____ fo = open("binary_file1.dat","wb") Laptop = ["Dell","HP","ACER"] _____._____(Laptop, fo) fo._____</pre>	2
33	Explain the types of errors occurring in Python programming language.	2
34	What does the return statement do in function? Explain with a suitable example.	2
35	Differentiate between break and continue statement used in python.	2
	<b>Section-C ( 3 Marks)</b>	
36	<p>Write a Python function that displays all the lines containing the word 'vote' from a text file "Elections.txt". For example, if the file contains:</p> <p style="padding-left: 40px;">In an election many people vote to choose their representative. The candidate getting the maximum share of votes stands elected. Normally, one person has to vote once. The process of voting may vary with time and region.</p> <p><b>Then the output should be :</b></p> <p>In an election many people vote to choose their representative. Normally, one person has to vote once.</p> <p style="text-align: center;"><b>OR</b></p> <p>Write a Python function that displays all the words starting and ending with a vowel from a text file "Report.txt". The consecutive words should be separated by a space in the output. For example, if the file contains:</p> <p style="padding-left: 40px;">Once there was a wise man in a village. He was an awesome story-teller. He was able to keep people anchored while listening to him.</p> <p><b>Then the output should be:</b></p> <p>Once a a awesome able</p>	3
37	A stack, named <b>ClrStack</b> , contains records of some colors. Each record is represented as a tuple containing four elements ColorName, RED, GREEN, BLUE. ColorName is a string, and RED, GREEN, BLUE are integers. For example, a record in the stack may be ('Yellow', 237, 250, 68)	3

Write the following user-defined functions in Python to perform the specified operations on **ClrStack**:

(i) **push\_Clr (ClrStack, new\_Clr)**: This function takes the stack **ClrStack** and a new record **new\_Clr** as arguments and pushes this new record onto the stack.

(ii) **pop\_Clr(ClrStack)**: This function pops the topmost record from the stack and returns it. If the stack is already empty, the function should display the message "**Underflow**".

(iii) **isEmpty (ClrStack)**: This function checks whether the stack is empty. If the stack is empty, the function should return **True**, otherwise the function should return **False**.

**OR**

Write the following user-defined functions in Python:

(i) **push\_trail (N,myStack)**: Here N and mystack are lists, and myStack represents a stack. The function should push the last 5 elements from the list N onto the stack myStack. For example, if the list N is [1,2,3,4,5,6,7], then the function push\_trail() should push the elements 3,4,5,6,7 onto the stack. Therefore the value of stack will be [3,4,5,6,7]. Assume that N contains at least 5 elements.

(ii) **pop\_one (myStack)**: The function should pop an element from the stack myStack, and return this element. If the stack is empty, then the function should display the message '**Stack Underflow**', and return None.

(iii) **display\_all (myStack)**: The function should display all the elements of the stack myStack, without deleting them. If the stack is empty, the function should display the message '**Empty Stack**'.

38 Predict the output of the following code:

```
def Examon (mystr):
    newstr = ""
    count = 0
    for i in mystr:
        if count%2!=0:
            newstr = newstr + str(count-1)
        else:
            newstr = newstr + i.lower()
            count += 1
    newstr = newstr + mystr[:2]
    print("The new string is:", newstr)
Examon ("GenX")
```

**OR**

```
def Change(X):
    for K,V in X.items():
        L1.append(K)
        L2.append (V)
```

```
D={1:"ONE",2:"TWO",3:"THREE"}
L1=[]
L2=[]
Change (D)
```

3

print(L1)  
print(L2)  
print(D)

### Section D

39 Suman has created a table named **WORKER** with a set of records to maintain the data of the construction sites, which consists of **WID**, **WNAME**, **WAGE**, **HOURS**, **TYPE**, and **SITEID**. After creating the table, she entered data in it, which is as follows :

4

WID	WNAME	WAGE	HOURS	TYPE	SITEID
W01	Ahmed J	1500	200	Unskilled	103
W11	Naveen S	520	100	Skilled	101
W02	Jacob B	780	95	Unskilled	101
W15	Nihal K	560	110	Semiskilled	NULL
W10	Anju S	1200	130	Skilled	103

(a) Based on the data given above, answer the following questions:

- Write the SQL statement to display the names and wages of those workers whose wages are between 800 and 1500.
- Write the SQL statement to display the record of workers whose SITEID is not known.
- Write the SQL statement to display WNAME, WAGE and HOURS of all those workers whose TYPE is 'Skilled'.
- Write the SQL statement to change the WAGE to 1200 of the workers where the TYPE is "Semiskilled".

OR

(b) Considering the above given table **WORKER**, write the output on execution of the following SQL commands:

- SELECT WNAME, WAGE\*HOURS FROM WORKER WHERE SITEID = 103;
- SELECT COUNT (DISTINCT TYPE) FROM WORKER;
- SELECT MAX(WAGE), MIN (WAGE), TYPE FROM WORKER GROUP BY TYPE;
- SELECT WNAME, SITEID FROM WORKER WHERE TYPE="Unskilled" ORDER BY HOURS;

40 A csv file "P\_record.csv" contains the records of patients in a hospital. Each record of the file contains the following data :

**Name of a patient , Disease, Number of days patient is admitted, Amount**

For example, a sample record of the file may be :

**["Gunjan", "Jaundice", 4,15000]**

Write the following Python functions to perform the specified operations on this file :

- Write a function **read\_data()** which reads all the data from the file and displays the details of all the 'Cancer' patients.
- Write a function **count\_rec()** which counts and returns the number of records in the file.

4

### Section E

41 A file, PASSENGERS.DAT, stores the records of passengers using the following structure:  
[PNR, PName, BRDSTN, DESTN, FARE]

5

where:

PNR=Passenger Number (string), PName=Passenger Name (string), BRDSTN= Boarding Station Name (string), DESTN= Destination Station Name (string) and FARE =Fare amount for the journey (float)

Write user defined functions in Python for the following tasks :

(i) **Create()** to input data for passengers and write it in the **binary** file PASSENGERS.DAT.

(ii) **SearchDestn (D)** - to read contents from the file PASSENGERS.DAT and display the details of those

Passengers whose DESTN matches with the value of D.

(iii) **UpdateFare ()** to increase the fare of all passengers by 5% and rewrite the updated records into the

file PASSENGERS.DAT.