



Delhi Public School, Howrah

PERIODIC TEST I (2025-2026)

CLASS – XII

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

SUBJECT: COMPUTER SCIENCE (CODE - 083)

Time Allowed:- 3 Hours

F.M.-70

General Instructions:

- This question paper contains 37 questions.
- All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions
- The paper is divided into 5 Sections- A, B, C, D and 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 3 questions (29 to 31). Each question carries 3 Marks.
- Section D, consists of 4 questions (32 to 35). Each question carries 4 Marks.
- Section E, consists of 2 questions (36 to 37). Each question carries 5 Marks.
- 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

1.	Predict the output when the following code is executed. My_list= [2,4,6,8,10] print(my_list[1:3]) (a) [2,4] (b) [4,6] (c) [4,6,8] (d) [6,8]	(1)
2.	In a program that processes user input, which built-in exception is likely to occur if the user enters a non-integer value when the program expects an integer? (a) "IndexError" (b) "ValueError" (c) "TypeError" (d) "KeyError"	(1)
3.	You are writing a program to log data to a file. Which file mode would you use to add new data to the end of the file without overwriting existing content? (a) 'r' (b) 'w' (c) 'a' (d) 'r+'	(1)
4.	In a large software project, what programming concept helps in breaking down the code into smaller, manageable, and reusable parts? (a) Files (b) Exceptions (c) Functions (d) Loops	(1)
5.	A program attempts to divide a number by zero. What will be the output of the following code? python try: result = 10 / 0 except ZeroDivisionError: print("Cannot divide by zero") else: print("Result:", result) finally: print("This will always execute")	(1)
6.	State whether the following statement is True or False. Rewrite the statement if false. A single 'try' block can have multiple 'except' blocks to handle different exceptions.	(1)

7.	You are processing a text file where each line represents a record. Which function is most suitable to read one record at a time? (a) `read()` (b) `read_line()` (c) `readline()` (d) `readlines()`	(1)
8.	Milan wants to divide a number and store the result without decimal places into an integer variable. Suggest him an appropriate operator from the following- (a) / (b) % (c) // (d) Both (A) & (B)	(1)
9.	While writing data to a new line in a text file, which character is automatically used by Python as the default end-of-line character? (a) `\\t` (b) `\\` (c) `\\r` (d) `\\n`	(1)
10.	Which of the following function definitions is syntactically correct in Python? (a) `def myFunction(arg1, arg2):` (b) `def myFunction(arg1, arg2):` (c) `function myFunction(arg1, arg2)` (d) `function myFunction(arg1, arg2):`	(1)
11.	State whether the following statement is True or False. Rewrite the statement if false. Exceptions are errors that occur during the compilation of a program.	(1)
12.	In a program that handles different types of data, which exception is raised when you try to perform an operation on a data type that doesn't support it (e.g., adding a number to a string)? (a) `ValueError` (b) `TypeError` (c) `RuntimeError` (d) `SyntaxError`	(1)
13.	Write the output of the following: for i in (1,2,3): print("A"*i) (a) 1 2 3 (b) A*1 A*2 A*3 (c) A AA AAA (d) Error	(1)
14.	Fill in the blank: In Python, the _____ statement can be used to ensure that a critical condition in your code is true, and raises an error if it's not. (a) `try` (b) `except` (c) `assert` (d) `raise`	(1)
15.	What is the output of the following code snippet? print (2%6) (a) Value Error (b) 0.33 (c) 2 (d) 2.3	(1)
16.	In Python, a function that performs an action but does not send back any value is often referred to as a _____ function (a) void (b) empty (c) null (d) zero	(1)
17.	When working with files, which method is used to move the file's read/write pointer to a specific location within the file? (a) `move()` (b) `seek()` (c) `position()` (d) `goto()`	(1)
18.	Predict the output of the following. a=(1,3,2)*2 print(a) (a) (1, 3, 2, 1, 3, 2) (b) (1, 1, 3, 3, 2, 2) (c) (2,6,4) (d) (1*2,3*2,2*2)	(1)
19.	Which of the following is a disadvantage of using functions in programming? (a) Increases code reusability (b) Reduces code length (c) Increases complexity (d) Improves code organization	(1)
Q20 and Q21 are ASSERTION AND REASONING based questions. Mark the correct choice as (a) A is True but R is False (b) Both A and R are true and R is the correct explanation for A (c) A is false but R is True (d) Both A and R are true but R is not the correct explanation for A		
20.	Assertion (A): CSV stands for comma-separated values, which is defined as a simple file format that uses specific structuring to arrange tabular data. Reason (R): The csv module is used to handle the CSV files to read/write and get data from specified columns.	(1)

21.	Assertion (A): The 'raise' statement in Python is used to trigger exceptions explicitly, which is useful for custom error handling. Reason (R): Exceptions are a mechanism to handle runtime errors, ensuring that programs can respond to unexpected situations.	(1)
SECTION – B		
22.	Explain how exception handling can be used to make a program more robust when dealing with user input. Provide a simple example. OR What is the output of the following? <pre>True = False while True: print(True) break</pre>	(2)
23.	Read the code given below and answer the question: <pre>fh = open ("main, txt", "w") fh.write("Bye") fh.close()</pre> If the file contains "GOOD" before execution, what will be the contents of the file after executing the code?	(2)
24.	Write a method in Python to write multiple lines of text contents into a text file, 'myfile.txt'. OR Predict the output and justify your answer: <pre>Odd = [31,73,95] print((Odd +[2, 4, 6])[4]) print((Odd +[12, 14, 16]) [4]) - (Odd +[2, 4, 6]) [4])</pre>	(2)
25.	Write a function EOReplace() in Python, which accepts a list L of numbers. Write a function EOReplace() in Python, which accepts a list L of numbers. Thereafter, it all even numbers increased by 1 and decrements all odd numbers by 1. Example: If Sample Input data of the list is : <pre>L=[10,20,30,40,35,55]</pre> Output will be: L=[11,21,31,41,34,54]	(2)
26.	Write a Python code snippet that opens a file named "log_report.txt" in append mode and adds a timestamped log entry to it. (Assume you have a 'timestamp' variable). OR The following code is having some errors. Underline each error and explain the reason: <pre>str="abcdefgh" str[5]="a" print(str) str="Python" print(str)</pre>	(2)
27.	Describe a scenario where you would use the 'else' block in a 'try-except' structure. Give a brief code example. OR Explain how exception handling can be used to make a program more robust when dealing with user input. Provide a simple example.	(2)
28.	Explain the differences between the 'r', 'w', and 'a+' modes when opening a file in Python.	(2)
SECTION – C		
29.	What is the difference between the formal parameters and actual parameters? What are their alternative names? Give a suitable Python code to illustrate both. OR A program needs to read sensor data from a file, process it, and save the results. Write a Python program that reads numerical data from "sensor_data.txt," that calculates the average, and handles the 'FileNotFoundError' if the file doesn't exist and any 'ValueError' that might occur if the file contains non-numerical data.	(3)

30.	Write a function called <code>removeFirst</code> that accepts a list as a parameter. It should remove the value at index 0 from the list. Note that it should not return anything (returns <code>None</code>). Note that this function must actually modify the list passed in, and not just create a second list when the first item is removed. You may assume the list you are given will have at least one element.	(3)
31.	(a) Write a function that receives two tuples and creates a third that contains all elements of the first followed by all elements of the second. OR (b) Write a function which takes two string arguments and returns the string comparison result of the two passed strings.	(3)

SECTION – D

32.	You are tasked with analyzing a text file containing customer feedback. Write a Python program to read "feedback.txt," count the total number of feedback entries (lines), and determine the average length of each entry (average number of words per line).	(4)
33.	The Fibonacci series is a sequence of numbers in which each number is the sum of the two preceding numbers, starting from 0 and 1: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ... Write a python program using loop to print first ten numbers of a Fibonacci sequence.	(4)
34.	(a) Design a Python function that takes a list of student dictionaries (each containing 'name' and 'score') and returns the name of the student with the highest score. OR (b) Write a Python program to print first ten Mersenne numbers and display "Prime" next to Mersenne Prime Numbers. Mersenne numbers are a sequence of numbers named after the French mathematician Marin Mersenne. They are defined as: $M = 2^n - 1$, where n is an integer. In other words, Mersenne numbers are one less than a power of two. Some Mersenne numbers are prime, and these are called Mersenne prime numbers.	(4)
35.	Create a Python program that simulates a basic calculator. The program should continuously ask the user for two numbers and an operation (+, -, *, /). Include exception handling to manage potential 'ValueError' if the user enters non-numeric input and 'ZeroDivisionError' if the user attempts to divide by zero.	(4)

SECTION - E

36.	A system is monitoring network traffic and logging events. Write a Python program to: Read events from "network_log.txt." Identify and extract log entries that indicate "CRITICAL" errors. Calculate the percentage of total log entries that are "CRITICAL." Generate a summary report in a new file "critical_report.txt" containing the extracted "CRITICAL".	(4) (1)
37.	(a) Name the function to do the following operations: (i). Returns the length of the string. (ii). Counts the number of times a sub-string occurs in a string . (iii). Returns True if string has at least 1 character and every character is either a number or an alphabet and False otherwise. (iv). Returns True if string has at least 1 character and every character is a lower case alphabet and False otherwise. (v). Removes all trailing whitespace in string. OR (b) Write a program that accepts a sentence and calculate the number of upper case letters and lower case letters. Suppose the following input is supplied to the program: Python Programming SKILLS Then, the output should be: UPPER CASE 8 LOWER CASE 15.	(5)