



# 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: COMPUTER SCIENCE (CODE - 083)**

**THEORY EXAMINATION**

**Time Allowed:- 3 Hours**

**F.M.-70**

**General Instructions:**

- This question paper contains 35 questions.
- The paper is divided into 5 Sections- A, B, C, D and E.
- Section A, consists of 18 questions (1 to 18). Each question carries 1 Mark.
- Section B, consists of 7 questions (19 to 25). Each question carries 2 Marks.
- Section C, consists of 5 questions (26 to 30). Each question carries 3 Marks.
- Section D, consists of 2 questions (31 to 32). Each question carries 4 Marks.
- Section E, consists of 3 questions (33 to 35). Each question carries 5 Marks.

**SECTION - A**

1.	“NOR gate” is constructed by using “NOT gate” followed by (a) AND gate (b) XOR gate (c) NAND gate (d) OR gate	(1)
2.	Give the output of the following code fragment, when- List1=list() print (List1)	(1)
3.	Write the output of the following: x=8 y=2 x+=y y-=x print(x, y)	(1)
4.	The ____ interpreter of python is termed as Python Shell. (a) Qualitative (b) Interactive (c) Script (d)Quantitative	(1)
5.	Python allows you to join/concatenate two tuples using ____ operator. (a) /(b) /(c) * (d)+	(1)
6.	What is the output when following code is executed? a=[[0,1,2],[3,4,5,6]] b=[1][2] print (a, b)	(1)
7.	____ means accessing each character one after the other by iterating through the elements of a string using for or while loop.	(1)
8.	Dipta downloaded a Python Program in her laptop, but she missed some of the indentations. Help her to understand the importance of indentation process in Python programming.	(1)
9.	Which of the following is the fastest memory device? (a) RAM (b) ROM (c) SECODARY MEMORY (d) BUS.	(1)
10.	Dritis visited a stationery shop to buy some essential items for his recent school project. Help him to assign a list containing the strings, 'Paper', 'Gel Pen', 'Pencil', 'Eraser', 'Scale'. If he wants to add a new item to the existing list what function will he use?	(1)

11.	<b>Fill in the blank:-</b> A program which acts as an interface between a user and a hardware is called _____ .	(1)
12.	Hexadecimal number system is composed of--- (a) 2 symbols (b) 10 symbols (c) 8 symbols (d)16 symbols	(1)
13.	Write the output of the following code: Word="Green Vegetable" print(Word.find("veg",2))	(1)
14.	Which of the following is/are correct ways of creating a tuple? (a) name = ("Rishi") (b) name = ('Rishi,') (c) name = (,Rishi) (d) name = (,"Rishi")	(1)
15.	A list consists of collection of items which are stored according to its_____ values.	(1)
16.	If we have a list of elements which is not meant to be changed, we use a _____ to prevent items from accidentally being added, changed or deleted - (a) String (b) List (c) Complex (d) Tuple	(1)
<p><b>Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as</b>  <b>(a) Both A and R are true and R is the correct explanation for A.</b>  <b>(b) Both A and R are true but R is not the correct explanation for A.</b>  <b>(c) A is True but R is False.</b>  <b>(d) A is False but R is True.</b></p>		
17.	<b>Assertion (A):</b> Defining sort () method with reverse=True as an argument sorts the list elements in the descending order. <b>Reason (R):</b> sort () method sorts the objects of a list in ascending order.	(1)
18.	<b>Assertion (A):</b> When a Python code is unable to accept an input, it results in Runtime error. <b>Reason (R):</b> Runtime error arises due to incorrect statement that results in no output.	(1)
<b>SECTION – B</b>		
19.	What is the output of the Python code snippet below? x="Amazing" print(x[3: ],"and",x[:2]) print(x[-7: ],"and",x[-4:-1])  <b>OR</b> Draw a circuit diagram corresponding to the following Boolean expressions: $F=A.B'+C'.D$	(2)
20.	Can you identify and correct the syntax errors in the given code snippet? My_tuple=(1,2,3,4) My_tuple[4]=7	(2)
21.	Anita of class XI is writing a Python program where she felt the importance of range function in iterative statements. Write down few words about range function.  <b>OR</b> Write a python program to find the third largest number in a user defined list.	(2)
22.	Yogesh and Taniya are going to work on a school project based on the functionalities of Boolean algebra. But they are not able to prove a Boolean expression for the same. Can you help them to prove the following Boolean expression? $X'.Y+X.Y'=(X'+Y).(X+Y)$	(2)
23.	Demonstrate your proficiency in programming by creating a program to calculate the sum And mean of elements in a tuple?  <b>OR</b> Create a logic circuit diagram that corresponds to the given expression: $F=A'.B+(C+D)'$	(2)
24.	The following code is having some errors. Rewrite the code after correcting and underlining each correction: For val in "tyopt" if val=="y" Continue:	(2)

	<pre>print(val) output: t o p t</pre> <p style="text-align: center;"><b>OR</b></p> <p>What will be the output of the following program:</p> <pre>x=10 if x&gt;2 or x&lt;5 and x==6:     print("OK") else:     print("No Output")</pre>	
25.	Express the following hexadecimal number into decimal number- (9E1A) <sub>16</sub> =(?) <sub>2</sub>	(2)
<b>SECTION – C</b>		
26.	A tuple and a list both are ordered sequence of elements of different data types, but there are major differences between them, distinguish between tuple and list.	(3)
27.	Sourav is a craft artist. He always makes creative art works. Now he wants to apply his creativity in Python programming language. Help Sourav with the appropriate Python code for the following pattern- 2 33 444 5555 66666	(3)
28.	Python includes some built in methods to manipulate strings. Which built-in methods are used in the following conditions? (i)Returns the number of occurrences of a sub string in a given string. (ii)Removes all trailing white spaces from a string. (iii)Replaces all occurrences of old string with new string or at most max occurrence if max code given.  <b>OR</b> Find out the errors in the following line of codes and justify your answer— L1=[2,4,5,9] L2=L1*3 L3=L1+3 L4=L1.pop(5) print(L1[6])	(3)
29.	A palindromic string, also known as a string palindrome, is a sequence of characters that reads the same backward as it does forward. In other words, it remains the same when its characters are reversed. Here are some examples of palindromic strings:Short strings: "madam", "dad", "mom", "radar". Write a program to check whether the entered string is a palindrome or not.	(3)
30.	Predict the output. (a) "wonders25".isalnum() (b) "Hello1235".isdigit() (c) "Hi Hello".istitle() (d) "This is nice".endswith("nice") (e) "wonder". (f) "I liked „Harry Potter“ very much"	(3)
<b>SECTION – D</b>		
31.	ASCII is the most widely-used alphanumeric code which is used in computers to translate text into a form that can be sent to and understood by other computers and devices such as modems and	(4)

	printers. Write the ASCII-7 for the word BYTE in both binary and hexadecimal notations and explain the steps.	
32.	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)
<b>SECTION - E</b>		
33.	(a) Rusa is very interested in learning Computer. But she got confused about the tasks performed by different application softwares. Help her to understand the same. (b) Help Rusa to find out the output of the following code: (5<10) and (10<5) or (3<18) and not 8<18	(4) (1)
34.	Convert the following numbers into equivalent binary numbers. (a) $(351)_{10}$ (b) $(58)_{10}$ (c) $(27.8125)_{10}$ (d) $(10AF)_{16}$ (e) $(742)_8$ <b>OR</b> Write a program to print the sum of the series $a+ar+ar^2+ar^3+ar^4+.....ar^n$	(5)
35.	(a) Rishi was learning the Fundamentals of Python from the NCERT book, where he saw that Python is a case sensitive language. Can you explain the term "case sensitive" in programming languages? (b) What will be the output of $145//4$ ? <b>OR</b> (i) Ritam was writing some Python scripts required for his school midterm project. The program needs a number as input and print the following pattern using loop-  5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 (ii) Make the correction in the following loop so that it prints multiples of 5 for a in range(5,100): print(a)	(4) (1)