

# KENDRIYA VIDYALAYA SANGATHAN, LUCKNOW REGION

## CUMULATIVE EXAMINATION – 2022-23

**Class** : XI  
**Time Allowed** : 3 Hours

**Subject** : Computer Science (083)  
**Maximum Marks**: 70

### General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 18 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 05 Short Answer type questions carrying 03 marks each.
6. Section D has 03 Long Answer type questions carrying 05 marks each.
7. Section E has 02 questions carrying 04 marks each.
8. All programming questions are to be answered using Python Language only.

SECTION - A		
1.	Which of the following is not a valid variable name in Python? Justify reason for it not being a valid variable name. (i) 2Length (ii) Length_ (iii) _Length (iv) Length	1
2	Arrange the following storage unit in ascending order of their storage capacity TB, MB, GB, PB	1
3	What will be the binary value of $(20)_{10}$ (i) 10101      (ii) 10100      (iii) 10111      (iv) 11001	1
4	Expand the following terms: (i) ASCII (ii) VDU	1
5	Choose the simplified form of expression: $(X.X'.Y) + (Y.Y'.X) + (X+X')$ (i) X      (ii) X+Y      (iii) 0      (iv) 1	1
6	What will be the result of following Python expression: >>> 12%7	1
7	Find the output of following code: (if 12 is entered for num1 and 5 is entered for num2) <pre>num1 = input('Enter First Number ')          # 12 num2 = int(input('Enter Second Number'))      # 5 result = num1 * num2 print(result)</pre>	1
8	Which of the following are keywords in Python: (i) PRINT (ii) Hello (iii) print (iv) input	1
9	Find and write the output of following Python expressions: (i) 19/5 (ii) 19//5	1
10	Name two input devices and two output devices.	1

11	Find and write the output of following Python expression: <code>&gt;&gt;&gt; 2**2**3</code> Or <code>&gt;&gt;&gt; not(20&gt;14) or (30&gt;=24) and (25&lt;=25)</code>	1
12	Give one example for each category of software: (i)Utility Software (ii)Operating System	1
13	How Cache memory improves the performance of computer system?	1
14	Draw the NAND and NOR gate symbol.	1
15	Find and write the output of following Python code: for num in range(2,-5,-1): print(num, end=", ")	1
16	Define the following: (i)Debugging (ii) Variable	1
17	What are the different execution modes in Python?	1
18	Differentiate between Syntax Error and Run-Time Error.	1
<b>SECTION – B</b>		
19	Differentiate between Compiler & Interpreter (Write any two differences only)	2
20	What is an Operating System? Write any 2 functions of Operating System.	2
21	Convert the following from given number system to required number system: (i) $(10101101)_2 \square (?)_{10}$ (ii) $(BAD)_{16} \square (?)_2$	2
22	Sumitra, working on a small snippet to check whether the entered number is even or odd. She has written the code but the code is not executing and error is coming. Help Sumitra and rewrite the code after making all necessary correction or change and underline each correction. <pre>num = input('Enter any number ') if num/2=0:     print('Even') else     print('Odd')</pre>	2
23	Write any two advantages and limitations of Python. OR What are comments? What are the different ways to give comment in Python program?	2
24	What are the uses of following software? Give at least one example of each. (i)Spreadsheet software (ii) Database software	2
25	Re-write the following FOR Loop code using WHILE Loop to get same output. for x in range(100,2,-2): print(x)	2
<b>SECTION – C</b>		
26	Draw the logic circuit diagram for: $(AB') + (BC)' + C'A'$	3
27	Explain the following Python functions: (i) type() (ii) id() (iii) len()	3

28	Define CPU? What are its functional units? Explain their role.	3
29	Write a program to enter 10 integer number and display their total and average.	3
30	Write a program to enter any number and find its factorial.	3
<b>SECTION - D</b>		
31	Draw a flowchart to check entered year is leap year or not.	5
32	Write a Python program to print the following pattern. 1 12 123 1234 12345	5
33	Write a Python program to enter any number and check it is Prime number or not.	5
<b>SECTION - E</b>		
34	State De-Morgan's Law. Verify any one De-Morgan's law using Truth Table.	4
35	Find and write the output of following Python code:  a = 10 b = 15 if a%5==0: a-=2 if a%3==0: a+=3 else: b+=3 if a%4==0 and b%6==0: a+=b print(a,b)	4