

HALF YEARLY EXAMINATION : 2024-25

Class - XI (CBSE)

Subject - Computer Science (083)

Time : 3 hrs.

M.M.: 70

General Instructions :

- Please check this question paper contains 35 questions.
- The paper is divided into 4 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 3 questions (31 to 33). Each question carries 5 marks.
- Section E, consists of 2 questions (34 to 35). Each question carries 4 marks.
- All programming questions are to be answered using Python Language only.

SECTION - A

- Q.1- A disk fragmentor is an example of :
- Application software
 - System software
 - Utility software
 - None of these
- Q.2- The physical components of a computer are called :
- Software
 - Hardware
 - ALU
 - CPU
- Q.3- ASCII code is a 7 bit code for _____ .
- letters
 - numbers
 - other symbols
 - all of these
- Q.4- The Binary equivalent of the octal number 13.54 is _____ .
- 1011.1011
 - 1001.1110
 - 1101.1110
 - None of these
- Q.5- Which gate produces 0 when all inputs are high?
- NOT
 - NAND
 - AND
 - NOR
- Q.6- Truth values are _____ and _____ .
- Q.7- What shape represents a decision in a flowchart?
- A diamond
 - A rectangle
 - An oval
 - None of these
- Q.8- A _____ is a diagrammatic representation that shows sequence of operations to be performed for the solution of a problem.
- Q.9- Python is a/an _____ language.
- high level
 - object oriented
 - procedural
 - difficult
- Q.10- Special meaning words of Python fixed for specific functionality are called _____ .
- Identifiers
 - functions
 - keywords
 - literals
- Q.11- Which of the following can be used to create comments?
- //
 - #
 - "
 - "..."
- Q.12- The input() returns the value as _____ type.
- integer
 - string
 - float
 - none of these

SECTION - C

Q.26- Write a Python code to input 10 integers and print only even numbers.

OR

Write a Python code to input a string and count number of vowels into it.

Q.27- Define types of errors in Python.

Q.28- Difference between = and == operator explain it with example.

Q.29- Solve the following:

- $7*8/5//2$
- $7*(8/(5//2))$
- $3**3**2$

Q.30- Prove De morgan's law using truth table.

- $(A + B)' = A'.B'$
- $(A.B)' = A' + B'$

SECTION - D

Q.31- Write Python code for the followings:

- Input 2 numbers and swap their values. Print values before swapping and after swapping both.
- What would be the output of the following code?
 - $a = 3+5/8$
 - $b = \text{int}(3 + 5/8)$

Q.32- Explain implicit and explicit conversion with example code.

SECTION - E

Q.33- Do as directed:-

- $(1010101)_2 \rightarrow (?)_{10}$
- $(7203)_8 \rightarrow (?)_{16}$
- $(ABC)_{16} \rightarrow (?)_2$
- $(98.125)_{10} \rightarrow (?)_2$
- $(278)_{16} \rightarrow (?)_{10}$

Q.34- a. Draw a flowchart to input a number and print its table.

b. Write a python code of the above problem for which you prepared the flow chart.

Q.35- a. Draw the circuit diagram for the following expression:

$$Z = ABC' + A'BC' + A(B + C)$$

b. Write a menu driven program to calculate Area of Triangle as choice 1 & Area of Rectangle as choice 2. If user enters any other choice except 1 or 2 message of "INVALID CHOICE" should be displayed.

OR

Write a Python code to input a number and check whether it is Prime or not.

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