5282

Register Number

XII - STD
COMPUTER SCIENCE

Time Allowed : 3.00 Hours]   [Maximum Marks : 70

Instructions :   (1)   Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.

(2)   Use **Blue** or **Black** ink to write and underline and pencil to draw diagrams.

PART - I

Note   :   (i)   Answer **all** the questions.   **15x1=15**

(ii)   Choose the most appropriate answer from the given **four** alternatives and write the option code and the corresponding answer.

1.   The small sections of code that are used to perform a particular task is called :
   (a)   Subroutines   (b)   Files
   (c)   Pseudocode   (d)   Modules

2.   The values which are passed to a function definition are called :
   (a)   arguments   (b)   subroutines
   (c)   function   (d)   definition

3.   Which of the following are mandatory to write the type annotations in the function definition ?
   (a)   { }   (b)   ( )   (c)   [ ]   (d)   < >

4.   Which of the following functions that retrieve information from the data type ?
   (a)   Constructors   (b)   Selectors
   (c)   Recursive   (d)   Nested

5.   The process of binding a variable name with an object is called
   (a)   Scope   (b)   Late binding
   (c)   Mapping   (d)   Early binding

6.   Which Scope refers to variables defined in current function ?
   (a)   Local Scope   (b)   Global Scope
   (c)   Module Scope   (d)   Function Scope

[Turn over

7. Which of the following is a finite set of instructions to accomplish a particular task ?
    (a) Flow chart   (b) Flow
    (c) Algorithm   (d) Syntax

8. From the following Sorting algorithm which algorithm needs the minimum number of Swaps ?
    (a) Bubble Sort   (b) Quick Sort
    (c) Merge Sort   (d) Selection Sort

9. Which of the following refers to the Visibility of variables in one part of a program to another part of the same program ?
    (a) Scope   (b) Memory
    (c) Address   (d) Accessibility

10. Which of the following is a distinct Syntactic Block ?
    (a) Subroutines   (b) Function
    (c) Definition   (d) Modules

11. Who developed python ?
    (a) Ritche   (b) Guido Van Rossum
    (c) Bill Gates   (d) Sunder Pitchai

12. This symbol is used to print more than one item on a single line ?
    (a) Semicolon (;)   (b) Dollar ($)
    (c) Comma (,)   (d) Colon (:)

13. Which operator is also called as Comparative Operator ?
    (a) Arithmetic   (b) Relational
    (c) Logical   (d) Assignment

14. Which of the following is not Logical Operator ?
    (a) and   (b) or   (c) not   (d) assignment

15. Which operator is also called as Conditional Operator ?
    (a) Ternary   (b) Relational
    (c) Logical   (d) Assignment

PART - II

Note :   Answer **any six** questions. Question No. **24** is **compulsory.**   **6x2=12**

16. Define function with respect to programming language.

17. What is abstract data type ?

18. Give a note on Namespaces.

19. Write the types of Scopes of Variable.

20. What is Sorting ?

21. What is Algorithmic Solution ?

22. What are the different modes that can be used to test python program ?

23. Write a command to execute the Python Script.

24. What is Keyword ? Give examples.

PART - III

Note :   Answer **any six** questions. Question No. **33** is **compulsory.**   **6x3=18**

25. Write a note on parameter without type.

26. Identify which of the following are constructors and selectors ?
    (a) N1=number()   (b) accetnum(n1)
    (c) displaynum(n1)   (d) eval(a/b)
    (e) x,y=makeslope(m), makeslope(n)   (f) display()

27. Explain the Enclosed Scope with an example.

28. Write the difference between Algorithm and Program.

29. Write a Pseudocode for Linear Search.

30. Write short notes on Escape Sequences with example.

31. Write short notes on input() function with example.

32. Explain Ternary Operator with examples.

33. Write an output for the following Python program.
    ```
    X=int(input ("Enter Number 1 : "))
    Y=int(input ("Enter Number 2 : "))
    print=("The sum=", X+Y)
    ```

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PART - IV

Note : Answer **all** the questions.

34. (a) How will you facilitate data abstraction ? Explain it with suitable example.

    OR

    (b) (i) Why scope should be used for variable ?
        (ii) Explain Global Scope with an example.

35. (a) Explain the characteristics of an algorithm.

    OR

    (b) What is Binary Search ? Discuss with example.

36. (a) Discuss in detail about Token in Python.

    OR

    (b) Write a note on :
        (i) Comments in Python
        (ii) Indentation

37. (a) Explain the Insertion Sort algorithm with example.

    OR

    (b) Explain Local Scope, Built in Scope with example.

38. (a) Explain about different types of operators in Python.

    OR

    (b) Write an output for the following Python Program.
```
a = 100
b = 10
print ("The sum =", a + b)
print ("The Difference =", a - b)
print ("The Product =", a*b)
print ("The Quotient =", a/b)
print ("The Remainder =", a%30)
print ("The Exponent =", a**2)
print ("The Floor Division =", a//30)
```

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