NADAR HR.SEC.SCHOOL, RAJAPALAYAM.
COMPUTER SCIENCE – MARCH - 2022
CLASS : 12

Time Allowed : 3.00 Hours   **Maximum Marks : 70**

PART - I

I . Choose the most appropriate answer from the given four alternatives and   **15 X 1 = 15**
Write the option code and the corresponding answer.

1. Which of the following is a distinct Syntactic block ?
   - (A) Definition
   - (B) Subroutines
   - (C) Modules
   - (D) Function
2. Which of the following will retrieve information from the data type ?
   - (A) Recursive
   - (B) Constructors
   - (C) Nested
   - (D) Selectors
3. Containers for mapping names of variables to object is called :
   - (A) Binding
   - (B) Scope
   - (C) Namespaces
   - (D) Mapping
4. The word comes from the name of a Persian Mathematician Abu Ja'far Mohammed ibn-i Musa al Khowarizmi is called :
   - (A) Algorithm
   - (B) Flowchart
   - (C) Syntax
   - (D) Flow
5. Which Operator is also called as Comparative Operator ?
   - (A) Logical Operator
   - (B) Arithmetic Operator
   - (C) Assignment Operator
   - (D) Relational Operator
6. 'elif' can be considered to be short form of
   - (A) else if
   - (B) nested if
   - (C) if...elif
   - (D) if...else
7. Which function is called as anonymous un-named function ?
   - (A) Recursion
   - (B) Lambda
   - (C) Define
   - (D) Built-in
8. What will be the output of the following code ?
   ```
   str1="Chennai Schools"
   str1[7]="_"
   ```
   - (A) Type Error
   - (B) Chennai-Schools
   - (C) Chennai
   - (D) Chenna-School
9. If List=[17, 23, 41, 10] then, List.append(32) will result :
   - (A) [10, 17, 23, 32, 41]
   - (B) [32, 17, 23, 41, 10]
   - (C) [41, 32, 23, 17, 10]
   - (D) [17, 23, 41, 10, 32]
10. Which of the following method is used as destructor ?
    - (A) _ _ rem _ _ ( )
    - (B) _ _ inti _ _ ( )
    - (C) _ _ del _ _ ( )
    - (D) _ _ dest _ _ ( )
11. A tuple is also known as:
    - (A) Attribute
    - (B) Table
    - (C) Field
    - (D) Row
12. The clause used to sort data in a database:
    - (A) GROUP BY
    - (B) SORT BY
    - (C) SELECT
    - (D) ORDER BY
13. The expansion of CRLF is :
    - (A) Control Router and Line Feed
    - (B) Control Return and Line Feed
    - (C) Carriage Return and Line Feed
    - (D) Carriage Return and Form Feed
14. A Framework for interfacing Python and C++ is :
    - (A) Cython
    - (B) Ctypes
    - (C) Boost
    - (D) SWIG
15. SQLite falls under which database system ?
    - (A) Hierarchical Database System
    - (B) Flat File Database System
    - (C) Object Oriented Database System
    - (D) Relational Database System

PART - II

II . Answer any six questions. Question No. 24 is Compulsory.　　　　**6 X 2 = 12**

16. What is Abstract Data Type ?
17. What is Mapping ?
18. What is Searching ? Write its types.
19. What are the different modes that can be used to test Python Program ?
20. Write the syntax of creating a tuple with 'n' number of elements.
21. Differentiate unique constraint and primary key constraint.
22. What is CSV file ?
23. Define Data Visualization.
24. Write the syntax of getopt.getopt method.

PART - III

III . Answer any six questions. Question No. 33 is compulsory.　　　　**6 X 3 = 18**

25. List the characteristics of an Algorithm.
26. List the difference between break and continue statements.
27. Write the rules of local variable.
28. What is sys.argv ?
29. What is the use of 'where clause'? Give a Python statement using the where clause.
30. Write any three uses of data visualization.
31. Write short notes on Arithmetic Operator with example.
32. Write a SQL statement using DISTINCT keyword.
33. Write a program to get the following output :
    A
    A B
    A B C
    A B C D
    A B C D E

PART - IV

IV. Answer all the questions.　　　　**5 X 5 = 25**

34. (A) (i) What are called Parameters ?
    (ii) Write a note on Parameter without type and Parameter with type.

    OR

    (B) Explain LEGB rule with example.

35. (A) Explain Bubble Sort Algorithm with example.

    OR

    (B) Construct the following SQL statements in the student table.
    (i) SELECT statement using GROUP BY Clause
    (ii) SELECT statement using ORDER BY Clause

36. (A) Explain input() and output() functions with example.

    OR

    (B) Explain the purpose of the following functions :
    (i) plt.xlabel
    (ii) plt.ylabel
    (iii) plt.title
    (iv) plt.legend()
    (v) plt.show()

37. (A) Write a detail note on for loop.

    OR

    (B) Differentiate Excel file and CSV file.

38. (A) Explain the different set operations supported by Python with suitable example.

    OR

    (B) Explain each word of the following command.
    Python <filename.py>-<i> <C++ filename without cpp extension>