B

HALF YEARLY EXAMINATION - 2023

XII - STANDARD

Time : 3.00 hrs.   COMPUTER SCIENCE   Marks : 70

Part - I

I. **Answer all the question:**   15 × 1 = 15

1. Which of the following are mandatory to write the type annotations in the function definition?

   a) { }   b) ( )   c) [ ]   d) < >

2. The data structure which is a mutable ordered sequence of elements is called

   a) Built in   b) List   c) Tuple   d) Derived data

3. Which members are accessible from outside the class?

   a) Public members   b) Protected members

   c) Secured members   d) Private members

4. Two main measures for the efficiency of an algorithm are

   a) Process and memory   b) Complexity and capacity

   c) Time and space   d) Data and Space

5. Which of the following is not a keyword in python?

   a) Break   b) While   c) Continue   d) Operators

6. Which amongst thin is not a jump statement?

   a) For   b) Pass   c) Continue   d) Break

7. Pick the correct one to execute the given statement successfully.

   if _____ :

   print (x, "is a leap year")

   a) x % 2 = 0   b) x % 4 = 0   c) x/4 = 0   d) x % 4 = = 0

8. The subscript of a string may be:

   a) Positive   b) Negative   c) Both (a) and (b)   d) Either (a) or (b)

9. Which of the following python function can be used to add more than one element. Within an existing list?

   a) append ( )   b) append_more ( )

   c) extend ( )   d) more ( )

10. Which of the following method is used as destructor?

    a) – – init – – ( )   b) – – dest – – ( )

    c) – – rem – – ( )   d) – – del – – ( )

11. What is the acronym of DBMS?

    a) Data Base Management Symbol   b) Data Base Managing System

    c) Data Base Management System   d) Data Basic Management System

12. The command to delete a table including the structure is

    a) DROP   b) DELETE   c) DELETES ALL   d) ALTER TABLE

13. The command used to skip a row in a CSV file is

    a) Next ( )   b) Skip ( )   c) Omit ( )   d) Bounce ( )

14. A frame work for interfacing python and C++ is

    a) Ctypes   b) Swig   c) Cython   d) Boost

15. The function that return the largest value of the selected column is

    a) MAX ( )   b) LARGE ( )   c) HIGH ( )   d) MAXIMUM ( )

Part - II

II. Answer any six from the following questions. Q.No. 24 is Compulsory

$$6 \times 2 = 12$$

16. What is subroutine?

17. What do you mean by Namespaces?

18. Write short notes on Tokens?

19. Define global scope?

20. What is instantiation?

21. Define control structure?

22. Differentiate unique and primary key constraint

23. What is the use of 'cd' command give an example.

24. What will be the value of x in the following python code?

    ℓ = [2, 4, 6 [1, 3, 5]]

    x = len (ℓ)

Part - III

III. Answer any six from the following question. Q.No. 33 is Compulsory.

$$6 \times 3 = 18$$

25. Differentiate pure and impure function?

26. Differentiate concrete data type and abstract data type?

27. List the characteristic of an algorithm?

28. Write a short about the followings with suitable example.

    a) Capitalize ( )   b) Swap case ( )

29. What are the advantages of tuples over list?

30. What is the difference between select and project command?

31. Write a note on open ( ) function of python. What is the difference between the two methods?

32. Write any three uses of data visualization?

33. Using if . . . elif . . . else . . . statement write a suitable program to display largest of three members?

Part - IV

IV. **Answer all the question**   **5 × 5 = 25**

34. a) Explain with an example interface and implementation.   (or)

    b) Explain the types of scopes for variable (or) LEGB rule with example?

35. a) Explain the bubble sort algorithm with example?   (or)

    b) Explain input ( ) and print ( ) functions with examples?

36. a) Write a detail note on for loop.   (or)

    b) What the different ways to insert an element in a list. Explain with suitable example.

37. a) Explain the scope of variables with an examples?   (or)

    b) Explain the different types of relationship maping?

38. a) Differentiate excel file and CSV file?   (or)

    b) Explain the purpose of following functions?

       a) plt. xlabel ( )   b) plt. ylabel ( )   c) plt. tittle ( )

       d) plt. legend ( )   e) plt. show ( )

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