

**HALF YEARLY EXAMINATION 2023****CLASS: 12****PART III – Computer Science****Time : 3.00 Hours****Total 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.
- Notes :**
- (i) This question paper contains **four** parts

**Part I****Choose the correct answer****15 x1= 15**

1. Which of the following is a distinct syntactic block?
  - a) Subroutines
  - b) Function
  - c) Definition
  - d) Modules
2. Which of the following is constructed by placing expressions within square brackets?
  - a) Tuples
  - b) Lists
  - c) Classes
  - d) quadrats
3. Which of the following is used in programming languages to map the variable and object?
  - a) ::
  - b) :=
  - c) =
  - d) ==
4. Two main measures for the efficiency of an algorithm are
  - a) Processor and memory
  - b) Complexity and capacity
  - c) Time and space
  - d) Data and space
5. What is the output of the following Python snippet?
 

```
a = 5
print (a*2, a**2)
```

  - a) 10, 100
  - b) 10, 10
  - c) 10, 25
  - d) Error
6. Which punctuation should be used in the blank?
 

```
if <condition> _____
    Statements-block 1
else:
    Statements-block 2
```

  - a) ;
  - b) :
  - c) ::
  - d) !
7. Which of the following keyword is used to begin the function block?
  - a) Define
  - b) for
  - c) finally
  - d) def
8. Which of the following operator is used for concatenation?
  - a) +
  - b) &
  - c) \*
  - d) =
9. What is the output of the following Python snippet?
 

```
SetA={'A', 2, 4, 'D'}
SetB={'A', 'B', 'C', 'D'}
print (SetA ^ SetB)
```

  - a) {2, 4, 'B', 'C'}
  - b) {'A', 'D'}
  - c) {2, 4}
  - d) {'B', 'C'}
10. Class members are accessed through which operator?
  - a) &
  - b) .
  - c) #
  - d) %
11. Which database model represents parent-child relationship?
  - a) Relational
  - b) Network
  - c) Hierarchical
  - d) Object
12. Which command lets to change the structure of the table?
  - a) SELECT
  - b) ORDER BY
  - c) MODIFY
  - d) ALTER
13. A CSV file is also known as a \_\_\_\_\_.
  - a) Flat File
  - b) 3D File
  - c) String File
  - d) Random File
14. Which of the following can be used for processing text, numbers, images, and scientific data?
  - a) HTML
  - b) C
  - c) C++
  - d) PYTHON

15. The function that returns the largest value of the selected column is  
 a) MAX ()                      b) LARGE ()                      c) HIGH ()                      d) MAXIMUM ()

### Part II

Answer any 6 of the following questions (Q.NO: 24 is compulsory)

6 x2= 12

16. What is a subroutine?  
 17. What is mapping?  
 18. What is an Algorithm?  
 19. Evaluate the following Python statements and what will be the value of m?  
 a, b = 30, 20  
 m = a if a<b else b  
 20. Write the different types of function.  
 21. What will be the output of the following python code?  
 str1 = "School"  
 print (str1\*3)  
 22. Write the syntax to declare a Class?  
 23. Differentiate Unique and Primary Key constraint  
 24. What will be the output of x in the following Python code?  
 List1=[2,4,6[1,3,5]]  
 x=len(List)

### Part III

Answer any 6 of the following questions (Q.NO: 33 is compulsory)

6 x3= 18

25. What is list? Give an example?  
 26. Define global scope?  
 27. Write the syntax of while loop?  
 28. What will be the output of the following code?  
 Mylist = [x\*\*2 for x in range(5)]  
 print(Mylist)  
 29. What is the role of DBA?  
 30. Difference between reader() method and DictReader class?  
 31. Define SQLite? What is its advantage?  
 32. Write any three uses of data visualization?  
 33. Write a SQL query to edit a student's age as 20 whose admno is 1005 from studinfo table of school database.

### Part IV

Answer all the questions.

5X5=25

34. a) What are called Parameters and write a note on  
 (i) Parameter without Type                      (ii) Parameter with Type  
 (OR)  
 b) Define List? Why List can be called as Pairs. Explain with suitable example  
 35. a) Explain LEGB rule with example.  
 (OR)  
 b) What is Binary search? Discuss with example.  
 36. a) Explain input () and print() functions with examples.  
 (OR)  
 b) Write a detail note on for loop  
 37. a) Explain the following built-in functions.  
 (a) id()      (b) chr()      (c) round()      (d) type()      (e) pow()  
 (OR)  
 b) Explain the different set operations supported by python with suitable example.  
 38. a) Differentiate Excel file and CSV file.  
 (OR)  
 b) Explain the various buttons in a matplotlib window.