

**POPULAR MATRIC. HR. SEC. SCHOOL-MIMISAL**

PRE-HALAF YEARLY EXAMINATION, NOV-2023

TIME : 3.00 Hrs.

**XII-COMPUTER SCIENCE**

MARKS :70

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

1. Which of the following character is used to give comments in python program?

- a) #                      b) &                      c) @                      d) \$

2. Which of the following is not a Token?

- a) Interpreter            b) Identifiers            c) Keyword            d) Operator

3. Which statement is generally used as a placeholder?

- a) continue            b) break            c) pass            d) goto

4. While defining a function which of the following symbol is used.

- a) ;                      b) .                      c) :                      d) \$

5. Strings in Python:

- a) Changeable            b) Mutable            c) Immutable            d) flexible

6. Which of the following is the slicing operator?

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

7. The keys in Python, dictionary is specified by

- a) =                      b) ;                      c) +                      d) :

8. Class members are accessed through which operator?

- a) &                      b) .                      c) #                      d) %

9. Which database model represents parents-child relationship?

- a) Relational            b) Network            c) Hierarchical            d) Object

10. A tuple is known as

- a) table                      b) row                      c) attribute                      d) field

11. Which command lets to change the structure of the table?

- a) SELECT            b) ORDER BY            c) MODIFY            d) ALTER

12. The clause used to sort data in database

- a) SORT BY      b) ORDER BY      c) GROUP BY      d) SELECT

13. Which is a Python package used for 2D charts?

- a) matplotlib.pyplot      b) matplotlib.pip      c) matplotlib.numpy      d) matplotlib.plt

14. Let setA={3,6,9}, setB={1,3,9}. What will be the result of the following snippet?

```
print(setA|setB)
```

- a) {3,6,9,1,3,9}      b) {3,9}      c) {1}      d) {1,3,6,9}

15. What will be the result of the following Python code?

```
S=[x**2 for x in range(5)]
print(S)
```

- a) [0,1,2,4,5]      b) [0,1,4,9,16]      c) [0,1,4,9,16,25]      d) [1,4,9,16,25]

**II. Answer any 6 of the following. (Q.No. 24 is compulsory)**

**6x2=12**

16. What are the different operator that can be used in Python?

17. Write note on range() in loop.

18. What are the main advantages of function?

19. What is slicing?

20. Write the syntax of creating a Tuple with n number of elements.

21. What is instantiation?

22. What is difference between Hierarchical and Network data Model?

23. Differentiate Unique and Primary Key constraint.

24. List the general types of data visualization.

**III. Answer any 6 of the following. (Q.No. 33 is compulsory)**

**6x3=18**

25. Explain Ternary operator with example.

26. List the difference between break and continue statements.

27. Differentiate ceil() and floor() function.

28. What will be the output of the given python program?

```
str1="welcome"
str2="to school"
str3=str1[:2] + str2[len(str2) - 2:]
print(str3)
```

29. What will be the output of the following code?

```
list=[2**x for x in range(5)]
print(list)
```

30. What are class members? How do you define it?

31. Explain Cartesian product with suitable example.

32. Write the use of savepoint command with an example.

33. Write a program to display

```
A
A B
A B C
A B C D
A B C D E
```

**IV. Answer the following.**

**5x5=25**

34. a) Consider the following employee table.

Write SQL commands for the questions.(i) to (v)

EMP CODE	NAME	DESIG	PAY	ALLOWANCE
S1001	Hariharan	Supervisor	29000	12000
P1002	Shaji	Operator	10000	5500
P1003	Prasad	Operator	12000	6500
C1004	Manjima	Clerk	8000	4500
M1005	Ratheesh	Mechanic	20000	7000

i) To display the details of all employees in descending order of pay.

ii) To display all employees whose allowance is between 5000 and 7000

iii) To remove the employees who are Mechanic.

iv) To add a new row.

v) To display the details of all employees who are Operator.

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(or)

b) Explain in details the type of pyplot using Matplotlib.

35. a) What are the different types of data model.

(or)

b) Explain the different operators in Relational algebra with suitable examples.

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

(or)

b) Explain about string operators in python with suitable example.

37. a) Explain the following built-in functions.

a) id()

b) chr()

c) round()

d) type()

e) pow()

(or)

b) Write a detail note on if..else..elif statement with suitable example.

38. a) Discuss in detail about Tokens in Python.

(or)

b) Explain the different set operations supported by python with suitable example.