OM SADHANA CENTRAL SCHOOL
HALF YEARLY EXAMINATION

MARKS   : 70   **EXAM NO :**

DURATION   : 3.00 Hrs.   **DATE   :**

I.VERY SHORT ANSWER: -   15X1=15

1. Identify and write the name of the module to which the following functions belongs:

   i) randint()   ii) floor()

2. Which of the following are not valid identifier names?

   i) pass   ii) if   iii) break   iv) none

3. What is the difference between interactive and script mode in python?

4. Rewrite the following code in python after removing all the syntax errors. Underline each correction done in the code.

   ```
   a,b = 2
   While a%b = 0
     a+=10
     b+=2
   Else:
     print('End')
   ```

5. Which of the following is/are not a valid operator in python?

   i) -=   ii) or   iii) =>   iv) =!

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

   A='8'

   print(A*5+str(int(A)*2))

7. How are keywords different from identifiers?

8. Predict output of the following code:

   A=[12,45,78,45,234]

   B=len(A)

   for i in range(0,B,2):

        print(i)

9. What do you understand by string slices?

10. Which of the following are not valid operations in python?

    i.   Slicing a list

    ii.   Concatenation of a list and a tuple

    iii. Slicing a dictionary

    iv.   Adding an element to an existing tuple.

11. Consider python statement : X=eval(input("Enter data"))

What will be the data type of X if the user input is:

i) [1,3,53]   ii) 45

12. If s=[34,56,44,(45,67),8,5] then what will be the output of :

i) len(s)   ii) s[::-2]

13. Identify the valid declaration of d:

d=("hello",34,56.7)

i) List   ii) tuple   iii) dictionary   iv) set

14. Which keyword in sql is used to find unique values from various duplicate values in a column?

15. Suggest to the suitable sql command through which we can check the structure of the already created table.

II. SHORT ANSWER: -   17X2=34

1. Rewrite the following python program after removing all the syntactical errors(if any), underline each correction:

   Def checkval():

       x=input("Enter the number")

       if x%2=0:

           print x, "is even"

       else if x<0:

           print x, "Should be positive"

       else

           print x,"is odd"

2. Define degree and cardinality.

3. Write the expended names for the following abbreviated terms used in networking and communications:

   i) TCP/IP   ii) HTTP   iii) SMTP   iv) NFC

4. What are immutable and mutable types? List immutable and mutable types of python.

5. Consider the following unsorted list:99,47,39,41,14,11. Write the passes of bubble sort for sorting the list in ascending order till the 4th iteration.

6. Convert the following binary numbers to decimal:

   (i) 10110   (ii) 111010   (iii) 1010100.011

7. Covert $FACE_{16}$ to binary.

8. A table 'employee' has 7 attributes and 5 tuples. 1 more rows are added and 2 columns is dropped. What will be its degree and cardinality?

9. Draw the diagram of the digital circuit for the following expression:

$F(X,Y,Z)=(X+Y).(\overline{X}+\overline{Z}).(Y+Z)$

10. What do you understand the following functions?

    (i) keys()   (ii) items()

11. Write a python program to find minimum element from a list of element along with its index in the list.

12. Convert the following for loop into a while loop:

    for k in range(1,20,5):

        print(k)

        k=k+1

13. Find the output of following:

        L1=[100, 900, 300, 400, 500]

        START=1

        SUM=0

        for C in range (START,4) :

                SUM=SUM+ L1[C]

                print (C, ":", SUM)

                SUM=SUM+L1[0]*10

                print (SUM)

14. What do you understand the following methods?

    i)   count()   ii) index ()

15. Differentiate between primary key and foreign key.

16. What is the significance of break and continue statements?

III. LONG ANSWER: -   3X3=09

1. Differentiate between DDL and DML commands.

2. Write SQL commands for the following on the basis of given table student:

No	Name	Department	Dateofjoining	Salary	Sex
1	Raja	Computer	21/05/98	80000	M
2	Sangita	History	21/05/97	9000	F
3	Ragu	Sociology	29/08/98	8000	F
4	Kumar	Linguistics	13/06/96	10000	M
5	Venkatraman	History	31/10/99	8000	M
6	Sidhu	Computer	21/05/86	14000	M
7	Aishwarya	Sociology	11/1/98	12000	F

Table: Teachers

i) To select all the information of teacher in computer department.

ii) To list the name of the female teacher in History department.

iii) To insert a new record in the Teachers table with the following data:

        8, "Mohan", "Computer", "1/1/2000", 12000, "M".

3. Write a program that searches for prime numbers from 15 through 25.

IV.VERY LONG ANSWER:-   **3X4=12**

1. Covert the following hexadecimal numbers to binary:

    (i) CA (ii) AC5   (iii) 98AB8   (iv) 5AB3

2. Consider the following tables GAMES and PLAYER. Write SQL commands and output for the following statements.

Table :**EMPLOYEE**

EmpId	Name	DoJ	Gender	City	Salary
101	Arul	1995-06-06	M	London	7000
102	Malar	1993-05-07	F	Delhi	5000
103	Taylor	1994-05-06	M	Paris	9000
104	Banu	1995-08-08	F	London	6000
105	Joseph	1995-10-08	M	London	6000
106	Savitha	1994-12-12	F	Paris	4500
107	Ramya	1995-12-08	F	Lyon	12000
108	Alex	1995-06-12	M	Seattle	8500

(i)To display the minimum salary for each city, arranged in alphabetic order of city name.

(ii)   To display maximum and minimum salary for each gender.

(iii)   To increase the salary of all Female employees of London and Paris by 1500.

(iv)   To display the sum of salary of all the employees who joined after January 1st, 1994.

3. When will occur the following errors?

    (i) ValueError   (ii) EOFError   (iii) NameError   iv) len()