Class: XII   **COMPUTER SCIENCE   MAX.MARKS: 30**

SECTION -A

Q:1 Multiple Choice Question   **(5 X 1= 5)**

1. Which of the following is valid arithmetic operator in Python:?

   (i) //   (ii) ?   (iii) <   (iv) and

2. Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after list1.pop(1)?

   (i) [3, 4, 5, 20, 5, 25, 1, 3]   (ii) [1,3,3, 4, 5, 20, 5, 25]

   (iii) [3, 5, 20, 5, 25, 1, 3]   (iv) [1, 3, 4, 5, 20, 5, 25,]

3. What is the output of the following program:

   ```
   def  myfunc(a):
       a = a + 2
       a = a * 2
       return a
   print(myfunc(2))
   ```

   (i) 8   (ii) 16   (iii) Indentation Error   (iv) Runtime Error

4. There is a Dictionary

   employee={'salary:10000','dept':Sales,'age':24,'name':'John'}

   Which of the following function will provide all the values of dictionary?

   (i)   employee.keys()   (ii)   employee.values()

   (iii)   employee.items()   (iv)   employee.clear()

SECTION –B (3 X 2 = 6)

5. Observe the following table and answer the question (a) , (b) and

TABLE: VISITOR

VisitiorID	VisitorName	ContactNumber
V001	ANAND	9898989898
V002	AMIT	9797979797
V003	SHYAM	9696969696
V004	MOHAN	9595959595

a) Write the name of most appropriate columns which can be considered as Candidate keys

b) What is the degree and cardinality of the table?

6.   a) What will be the output of following python code:?

```
for i in range(1,12):
    if i%2==0:
        continue
print(i)
```

b) Call the given function using KEYWORD ARGUMENT with values 100 and 200

```
def Swap(num1, num2):
    num1,num2=num2,num1
    print(num1,num2)
Swap(----- , ------)
```

7. Which line number of code(s) will not work and why?

```
def Interest(P,R,T=7):
    I = (P*R*T)/100
    print(I)
Interest(20000,.08,15)            #Line 1
Interest(T=10,20000,.075)         #Line 2
Interest(P=10000,R=.06,Time=8)    #Line 3
Interest(80000,T=10)              #Line 4
```

SECTION – C (4 X 3= 12)

8. What will be the output of the following code:

```
def JumbleUp(mystr):
    L = len(mystr)
    str2=" "
    str3=" "
    for i in range(0,L,2):
        str2=str2 + mystr[i+1]+mystr[i]
        for ch in str2: if ch>='R' and ch<='U': str3+='$'
    else:
        str3+=ch.lower()
        return str3
mystr="HARMONIOUS"
mystr=JumbleUp(mystr)
print(mystr)
```

9. a) Observe the given Table TEACHER and give the output of question (i) and (ii)

TEACHER_CODE	TEACHER_NAME	DOJ
T001	ANAND	2001-01-30
T002	AMIT	2007-09-05
T003	ANKIT	2007-09-20
T004	BALBIR	2010-02-15
T005	JASBIR	2011-01-20
T006	KULBIR	2008-07-11

(i) SELECT TEACHER_NAME, DOJ FROM TEACHER WHERE TEACHER_NAME LIKE "%I%"

(ii) SELECT * FROM TEACHER WHERE DOJ LIKE "%-09-%";

b) Suppose a table BOOK contain columns (BNO, BNAME, AUTHOR, PUBLISHER), Raj is assigned a task to see the list of publishers, when he executed the query as:
SELECT PUBLISHER FROM BOOK;
He noticed that the same publisher name is repeated in query output. What could be possible solution to get publisher name uniquely? Rewrite the following query to fetch unique publisher names from table.

10. What is Local Variable and Global Variables? Illustrate with example

SECTION-D (8 X 1 = 8)

11. Write SQL queries for (i) to (iv) and find outputs for SQL queries (v) to (viii) which are based on tables

TABLE : ACCOUNT

ANO	ANAME	ADDRESS
101	Nirja Singh	Bangalore
102	Rohan Gupta	Chennai
103	Ali Reza	Hyderabad
104	Rishabh Jain	Chennai
105	Simran Kaur	Chandigarh

TABLE: TRANSACT

TRNO	ANO	AMOUNT	TYPE	DOT
T001	101	2500	Withdraw	2017-12-21
T002	103	3000	Deposit	2017-06-01
T003	102	2000	Withdraw	2017-05-12
T004	103	1000	Deposit	2017-10-22
T005	102	12000	Deposit	2017-11-06

(i) To display details of all transactions of TYPE Withdraw from TRANSACT table

(ii) To display ANO and AMOUNT of all Deposit and Withdrawals done in month of "May" 2017 from table TRANSACT

(iii) To display first date of transaction (DOT) from table TRANSACT for Account having ANO as 102

(iv) To display ANO, ANAME, AMOUNT and DOT of those persons from ACCOUNT and TRANSACT table who have done transaction less than or equal to 3000

(v) SELECT ANO, ANAME FROM ACCOUNT WHERE ADDRESS NOT IN ('CHENNAI', 'BANGALORE');

(vi) SELECT DISTINCT ANO FROM TRANSACT

(vii) SELECT ANO, COUNT(*), MIN(AMOUNT) FROM TRANSACT GROUP BY ANO HAVING COUNT(*)> 1

(viii) SELECT COUNT(*), SUM(AMOUNT) FROM TRANSACT WHERE DOT <= '2017-10-01'