TERM-2: SAMPLE PAPER – 3
SUBJECT: COMPUTER SC. (083) - XII

Time allowed: 2 hours **Maximum Marks: 35**

General Instructions:

- The question paper is divided into 3 sections - A, B and C
- Section A, consists of 7 questions (1-7). Each question carries 2 marks.
- Section B, consists of 3 questions (8-10). Each question carries 3 marks.
- Section C, consists of 3 questions (11-13). Each question carries 4 marks.

(SECTION A)

Each question carries 2 marks

Q1. Give any two characteristics of stack. (2)

Q2. (i) Expand the following: (1)

PPP , POP3

(ii) Out of the following, which is the fastest wired and wireless medium of transmission? (1)

Twisted Pair Cable, Coaxial cable, opticalfibre, Radio wave, Ethernet cable.

Q3. Name 4 Data types used to store Numeric data in Databases? (1)

Q4. A resultset is extracted from the Customer table using the cursor object (that has been already created) by giving the following statement. (2)

Rec_Data=cursor.fetchall()

(a) How many records of the table will be returned by fetchall() method?

(b) What will be the datatype of Rec_Data object after the given command is executed?

Q5. Write the output of the queries (a) to (d) based on the table Sportstars, given below: (2)

Table: Sportstars

Admn No	Name	DOB	Sport	Medals	Class
V1237	Vanshika	2005-02-19	Tennis	3	11
S1432	Ruhaani	2005-09-11	Football	5	12
SM1781	Aalam	2005-07-01	Cricket	4	11
V1935	Manan	2005-04-07	Football	6	11
S1276	Aarav	2005-10-06	Tennis	4	12
SM1872	Rehaan	2004-12-11	Football	3	12

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a) SELECT COUNT(*) FROM Sportstars WHERE Medals>=4;

b) SELECT SUM(Medals) FROM Sportstars WHERE Class=12;

c) SELECT MAX(DOB) FROM Sportstars;

d) SELECT DOB FROM Sportstars WHERE Admn_No LIKE "SM%"

Q6. (i) Which command deletes an entire table, a view of a table or other objects in the database? (1)

(ii) What are SQL Joins? (1)

Q7. Consider the Table Customers given below: (2)

ID	Name	Age	City	Salary
1	Kashika	37	Jammu	80000.00
2	Anupriya	35	Shimla	75000.00
3	Vijayan	36	Hyderabad	65000.00
4	Krishnan	35	Chennai	55000.00
5	Harsh	37	Gandhinagar	85000.00
6	Raisa	32	Mumbai	45000.00
8	Clifford	36	Chennai	65000.00
9	Jaisha	36	Mumbai	85000.00
10	Aseem	37	Hyderabad	75000.00
11	Shona	35	Hyderabad	65000.00
12	Manan	38	Jammu	60000.00

(a) Identify the degree and cardinality of the table.

(b) Which field should be made the primary key? Justify your answer.

SECTION - B

Each question carries 3 marks

Q8. Write a function in Python POP(Arr), where Arr is a stack implemented by a list of numbers. The function returns the value deleted from the stack. (3)

Q9. (i) A table, SPORTSTARS has been created in a database with the following fields: (3)

Admn_No, Name, DOB, Sport, Medals, Class

Give the SQL command to rename the field Class to Grade in this table.

(ii) Which of the following is a DDL command?

DELETE FROM, DROP TABLE, CREATE TABLE, INSERT INTO

Q10. Golden Tulips is using MySQL to create a database called STUDENTDETAILS with a table Student which the following structure. Write the SQL commands for doing the same. (3)

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Field	Data Type	Remarks	NULL
StudentID	char(10)	Primary Key	NO
NAME	varchar(30)		NO
DOB	Date		NO
CITY	varchar(30)		YES
MARKS	Int		YES
Email	varchar(30)		YES

(SECTION C)

Each question carries 4 marks

Q11. Write SQL commands for the queries (a)-(d) based on the two tables TAXITYPE and TRAVEL (4)

TABLE: TAXITYPE

TAXI_CODE	TAXITYPE	PERKM
T01	TEMPO TRAVELLER	40
T02	AC INNOVA	20
T03	AC ERTIGA	15
T04	AC HATCHBACK	10
T05	AC SEDAN	10

TABLE: TRAVEL

CNO	CNAME	TRAVELDATE	KM	TAXI_CODE	NOP
101	Randeep Singh	2018-11-07	200	T01	12
102	Sharad Bali	2018-12-21	120	T04	4
105	Sangeeta M	2019-04-25	450	T01	15
103	Manish Nagpal	2019-01-29	280	T02	5
107	Veronica Masih	2019-03-12	365	T04	2
104	Dinesh Hoon	2019-10-28	290	T05	4
106	Ramita Malik	2019-04-06	100	T01	20

a) To display CNO, CNAME, TRAVELDATE from the table TRAVEL in descending order of CNO.

b) To display the CNAME of all customers from the table TRAVEL who are travelling by vehicle with code T01 or T02

c) To display the CNO and CNAME of those customers from the table TRAVEL who travelled between '2019-01-06' and '2019-05-01'.

d) To display all the details from table TRAVEL for the customers, who have travel distance more than 250 KM in ascending order of NOP (Number of Passengers)

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Q12. (i) Give two advantages and two disadvantages of bus topology (4)

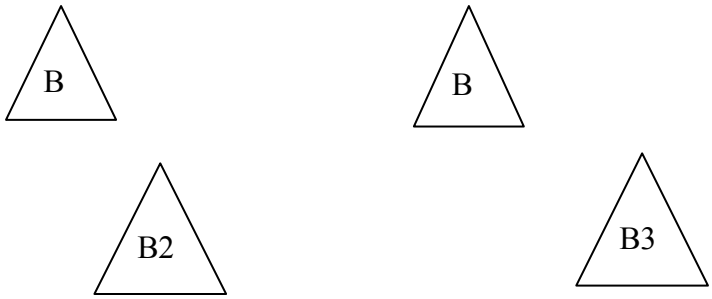
OR

Define the following terms:

Bandwidth, IP address

(ii) How are Radio Waves and Microwaves different?

Q13. Ishana Electronics Company headquaters has four blocks of buildings as shown: (4)



B3 TO B1 -50 M B1 TO B2 – 60 M B2 TO B4 – 25 M

B4 TO B3 -170 M B3 TO B2- 125 M B1 TO B4 – 90 M

Center to center distsnce between various blocks

Number of computers in each block :

B1-150 B2-15

B3-15 B4-25

The computers in each block are already networked; however the company now wants to connect the blocks.

i. Suggest the most appropriate topology for the connections between the blocks.

ii. The company wants internet accessibility in all the blocks. The suitable and cost-effective technology for that would be:

iii. The company is planning to link its head office situated in New Delhi with the offices in hilly areas. Suggest a way to connect it economically:

iv. Suggest the most appropriate location of the server and why?

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