PREBOARD 1(Term II)
CLASS XII (2021-2022)
SUBJECT :: COMPUTER SCIENCE(CODE 083)

Maximum Marks : 35 **Time Allowed:: 2hrs**

General instructions:

- The paper is divided into 3 Sections- A, B and C.
- Section A, consists of 7 Question (1-7). Each question carries 2 marks.
- Section B, consists of 3 Question (8-10). Each question carries 3 marks.
- Section C, consists of 3 Question (11-13). Each question carries 4 marks.
- Internal choice have been given for question numbers 7,8 and 12.

<table>
<tr><td></td><td></td><td>SECTION A
Each Question carries 2 Marks</td><td></td></tr>
<tr><td>Q.No</td><td>Part No.</td><td>Questions</td><td>Marks</td></tr>
<tr><td>1.</td><td></td><td>Name four basic operations performed on stack.</td><td>(2)</td></tr>
<tr><td>2.</td><td>(i)</td><td>Expand the following
HTTPS , XML</td><td>(1)</td></tr>
<tr><td></td><td>(ii)</td><td>Rearrange the following terms in increasing order of data transfer rates:
Gbps ,Mbps ,Tbps ,Kbps ,Bps</td><td>(1)</td></tr>
<tr><td>3.</td><td></td><td>Differentiate between fetchone() and fetchall()</td><td>(2)</td></tr>
<tr><td>4.</td><td></td><td>In the following connection string, Identify the elements:
Connect(……..=’local host’,……=’root’)</td><td>(2)</td></tr>
<tr><td>5.</td><td></td><td>Write the output of the queries(a) to (d)based on the table ACTIVITY.
Table : ACTIVITY
<table>
<tr><th>ACode</th><th>Activity name</th><th>Stadium</th><th>ParticipantsNum</th><th>PrizeMoney</th><th>ScheduleDate</th></tr>
<tr><td>1001</td><td>Relay 100x4</td><td>Star Annex</td><td>16</td><td>10000</td><td>23-jan-2004</td></tr>
<tr><td>1002</td><td>High Jump</td><td>Star Annex</td><td>10</td><td>12000</td><td>12-dec-2003</td></tr>
<tr><td>1003</td><td>Shot Put</td><td>Super Power</td><td>12</td><td>8000</td><td>14-feb-2004</td></tr>
<tr><td>1005</td><td>Long Jump</td><td>Star Annex</td><td>12</td><td>9000</td><td>01-jan-2004</td></tr>
<tr><td>1008</td><td>Discuss Throw</td><td>Super Power</td><td>10</td><td>15000</td><td>19-mar-204</td></tr>
</table>
(a) SELECT COUNT (DISTINCT ParticipantsNum) FROM ACTIVITY;
(b) SELECT MAX(ScheduleDate), MIN(ScheduleDate) FROM ACTIVITY;
(c) SELECT SUM(PrizeMoney) from ACTIVITY where Stadium=’Star Annex’;
(d) SELECT Acode from ACTIVITY ORDER BY Acode DESC;</td><td>(2)</td></tr>
</table>

6.	(i)	Which clause is used for grouping?	(1)
	(ii)	What do you mean by primary key. Give suitable example of Primary Key	(1)
7.			(2)

Book ID	Title	Author	Publisher	Price
1001	The Leader who had no title	Robin Sharma	PHI	500
1002	You Can Win	Shiv Kheda	TMH	253
1003	Rich Dad Poor Dad	Robert T. Kiyosaki	PHI	564
1004	Success Through a Positive Mental Attitude	Napoleon Hill	Penguin	522
1005	Fear Not, Dream Big, & Execute	Jeff Meyer	MCH	845
1006	Leadership: The Art of Inspiring People to Be Their Best	Craig B. Whelden	Penguin	542

Consider the table, **BOOKS** given below

		a. Identify the attribute best suitable to be declared as a primary key.	
		b. Write the degree and cardinality of the table **BOOKS**.	
		OR a. Identify candidate key(s) from the table **BOOKS** b. What do you understand by foreign key.	
		SECTION B **Each question carries 3 Marks**	

8. Write a function in Python PUSH (Lst), where Lst is a list of numbers. From this list push all numbers not divisible by 6 into a stack implemented by using a list. Display the stack if it has at least one element, otherwise display appropriate error message. (3)

OR

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

9 (i) Write SQL command to insert the following data into the table **BOOKS**. (1)
Book_ID= 2010, Title= "A Book of Comp. Sc.", Author= "Praveen Sharma" and Price = 625

(ii) Which of the following is/ are DML and DDL command(s)? (2)
a) SELECT b) ALTER c) DROP d) UPDATE

10 Prachi has created a database named SCHOOL in MYSQL.She now needs to create a table TEACHER in the database to store the records of various teachers.The table TEACHER has the following structure. (3)

Table : TEACHER

Field Name	Data Type	Remarks
Teacher code	Char(5)	Primary key
Teacher Name	Char(30)	
Subject	Char(20)	
Salary	Integer	

Help her to complete the task by suggesting proper SQL Commands.

SECTION C

Each question carries 4 Marks

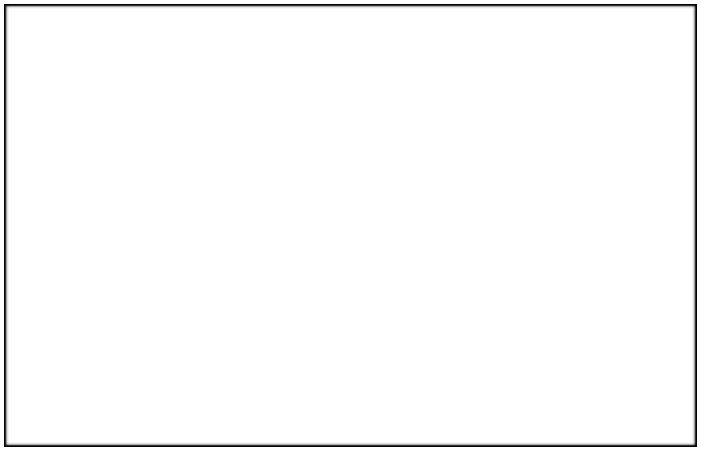
11 Write SQL queries for (i) to (iv) and find outputs for SQL queries (v) to (viii), which are based on the tables.(8) (4)

TRAINER

TID	TNAME	CITY	HIREDATE	SALARY
101	Sunaina	Mumbai	1998-10-15	90000
102	Anamika	Delhi	1994-12-24	80000
103	Deepti	Chandigarh	2001-12-21	82000
104	Meenakshi	Delhi	2002-12-25	78000
105	Richa	Mumbai	1996-01-12	95000
106	ManiPrabha	Chennai	2001-12-12	69000

COURSE

CID	CNAME	FEES	STARTDATE	TID
C201	AGDCA	12000	2018-07-02	101
C202	ADCA	15000	2018-07-15	103
C203	DCA	10000	2018-10-01	102

			C204	DDTP	9000	2018-09-15	104
			C205	DHN	20000	2018-08-01	101
			C206	O'LEVEL	18000	2018-07-25	105
		(i) Display the Trainer Name, City & Salary in descending order of their Hiredate. (ii) To display the TNAME and CITY of Trainer who joined the Institute in the month of December 2001. (iii) To display TNAME, HIREDATE, CNAME, STARTDATE from tables TRAINER and COURSE of all those courses whose FEES is less than or equal to 10000. (iv) To display number of Trainers from each city.					
12	(i)	Give two advantages of Computer Network OR Define the following terms URL , Website					(2)
	(ii)	How is LAN different from WAN?					(2)
13		Sanskar University of Himachal Pradesh is setting up a secured network for its campus at Himachal Pradesh for operating their day-to-day office & web based activities. They are planning to have network connectivity between four buildings. Answer the question (i) to (iv) after going through the building positions in the campus & other details which are given below:  Shortest distance between various Buildings Main to Admin 50m Main to Finance 100m Main to Academic 70m Admin to Finance 50m Finance to Academic 70m					(4)

Admin to Academic	60m

Number of computers:-

Campus	No. of Computers
Main	150
Admin	75
Finance	50
Academic	60

As a network expert, you are required to give best possible solutions for the given queries of the university administration:-
(a) Suggest cable layout for the connections between the various buildings,
(b) Suggest the most suitable building to house the server of the network of the university,
(c) Suggest the placement of following devices with justification:
1. Switch/Hub 2. Repeater
(d) Suggest the technology out of the following for setting-up very fast Internet connectivity among buildings of the university
1. Optical Fibre 2. Coaxial cable 3. Ethernet Cable