



INDIAN SCHOOL SOHAR
PRE-BOARD II EXAMINATION (2021-22)
INFORMATICS PRACTICES (065)

CLASS: XII

DATE: 22/03/2022

MAX MARKS: 35

DURATION: 2 hours

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.
- Internal choices have been given for question numbers – 3, 6, 7, 9 and 12.

SECTION – A Each question carries 2 marks		
Q. No	Question	Marks
1.	(i) Sumesh has purchased a new Smart TV and wants to cast a video from his mobile to his new Smart TV. Identify the type of network being used by him. Explain.	(1)
	(ii) I : <ul style="list-style-type: none"> • am a technology that allow you to make voice calls using a broad band internet connection. • take audio/video input and converts them into a digital information so that it can be transferred over internet along with other data on IP. Who am I?	(1)
2.	(i) Ms. Jhanvi is using a table with the following columns: NAME, CLASS, COURSE_ID, COURSE_NAME She needs to display the name of students, who have not been assigned any stream or have been assigned a COURSE_NAME that ends with “economics”. She wrote the following command, which did not give the desired result. SELECT NAME, CLASS FROM STUDENTS WHERE COURSE_NAME=NULL OR COURSE_NAME= "%ECONOMICS"; Help Ms. Jhanvi to run the query by removing the error and write the correct query.	(1)
	(ii) Jhanvi wants to delete the records of another table named “EMP” where the "FirstName" is "Rama". She has entered the following SQL statement. An error is being displayed. Help her correct the statement. DELETE * 'RAMA' FIRSTNAME FROM EMP;	(1)
3.	Email is a fast and efficient way to communicate with multiple users at the same time. <ul style="list-style-type: none"> (i) Enumerate the protocols used in an email. (ii) Differentiate between Cc and Bcc. 	(2)

OR

Sharukh, an apprentice has just started learning web technologies. Help him in understanding the difference between web hosting and web server with the help of a suitable example.

4. Consider the decimal number x with value 9945.8853. Write commands in SQL to:
 (i) Round it to 2 places before the decimal.
 (ii) Truncate it to ten's place. (2)

5. Riya has typed the following text in the address bar:
<http://www.cbse.international.com/help.htm>
 Explain to her the concept of URL and domain name with reference to the above address. (2)

6. Consider the following SQL string: "fortuner". Write commands to display:
 (i) "tune"
 (ii) "or"
OR
 Briefly explain the purpose of the following SQL functions:
 (i) instr()
 (ii) substr() (2)

7. Mr. Rohan, an HR Manager in Vedanta Hospital has created the following table to store the records of Doctors. (2)

Table: Doctor

I D	DOCName	Department	DOJ	Gender	Salary
1	Amit Kumar	Orthopedics	1993-02-12	M	35000
2	Anita Hans	Pediatrics	1998-10-16	F	30000
3	Sunita Maini	Gynecology	1991-06-23	F	40000
4	Joe Thomas	Surgery	1994-10-20	M	55000
5	Gurpreet Kaur	Pediatrics	1999-11-24	F	52000
6	Anandini Burman	Oncology	1994-03-16	F	31000
7	Siddharth Dang	Surgery	1995-09-06	M	47000
8	Rama Mukherjee	Oncology	2000-06-27	F	54500

He has written following queries:

- (i) Select max(year(DOJ)) from Doctor;
- (ii) Select left(DOCName,6) from Doctor where gender<>'F' order by Salary desc;

Predict the output.

OR

Based on the table given above, help Mr. Rohan to write queries for the following task:

- (i) To display the departments available in the table in ascending order of department names.
- (ii) Increase the salary of all female doctors by 5%.

SECTION – B

Each question carries 3 marks

8. Shreya is working with functions of MySQL. Explain her following:
(i) What is the purpose of dayofweek() function?
(ii) How many parameters does it accept?
(iii) What is the general format of its return type? (3)

9. Predict the output of the following queries:
(i) `Select concat(ltrim(' India '), mid('is my country',-10)) ;`
(ii) `Select day(sysdate()+45) Output ;`
(iii) `Select mod(sign(123),pow(2,3)) Result;` (3)

OR

Ms. Sarkar is working on a MySQL table named 'RESORT' having the following structure:

Field	Type	Null	Key
Roomno	Char(4)	No	PRI
Customername	Varchar(20)	Yes	
Type	Varchar(10)	Yes	
Rent	Integer(6)	Yes	

She needs to perform the following tasks on the table:

- (i) To display the total number of characters in each customer's name.
- (ii) Extract 2 characters from 3rd place of the room type column in upper case and display it.
- (iii) Compute the remainder on division of the room rent by 2 using SQL function.

Suggest suitable SQL function for the same. Also write the query to achieve the desired task.

10. While dealing with string data type in MySQL, it's observed that sometimes unnecessary space character comes in between, which hampers the successful execution of a string manipulation module. Name the suitable MySQL function(s) to remove leading, trailing and both type of space characters from a string. (3)
Also give MySQL queries to depict the same.

SECTION – C

Each question carries 4 marks

11. Consider the **LOANS** table given below and give the SQL commands to perform the following: (4)

Table: **LOANS**

Accno	Cust_Name	Bank	Instalments	Loan_Amount	Int_Rate
1	S.P. Sharma	SBI	25	300000	12.00
2	R.K. Jain	HDFC	10	500000	10.00
3	K.S. Dhall	Axis	15	800000	NULL
4	P. Sharma	SBI	25	200000	10.00
5	M.P. Yadav	Axis	15	700000	12.50
6	S. Sinha	SBI	10	500000	12.50

Display:

- (i) The average of all loan amount whose interest rate is greater than 10.
- (ii) The bank wise total Interest from loans table.
- (iii) The count of all loan account holders whose name contains a substring 'ha'.
- (iv) The installment wise minimum interest rate for all loan account holders with at least 10 instalments remaining.

12.

Aniket, a database analyst has created a 'BANKEMPLOYEE' table as given below:

Table: BANKEMPLOYEE

Bno	Ename	Bname	Dojoin	Salary
B101	Karan	Bank Muscat	2020-02-10	25000
B102	Puneet	HSBC	2002-10-18	50000
B103	Sunny	Bank Muscat	1999-01-15	60000
B104	Jayant	HSBC	2010-11-25	30000
B105	Mary	Bank Muscat	1998-09-20	45000
B106	Anto	Oman Arab Bank	2019-10-12	42600
B107	Kunal	Null	2010-08-30	50000

He has written the following queries:

- (i) Select lcase(Ename) from BANKEMPLOYEE where Dojoin not like '%10%';
- (ii) Select max(Salary)-min(Salary) Sal_Difference from BANKEMPLOYEE ;
- (iii) Select Bname from BANKEMPLOYEE group by Bname having avg(Salary)<=40000;
- (iv) Select Day(Dojoin) from BANKEMPLOYEE where year(Dojoin)>2010;

Help him predict the output of the above given queries.

OR

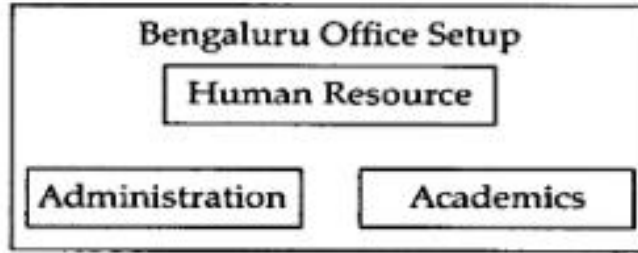
- (i) Given a table **SHIPMENT** (Sid, cuid, item), Reghu applies the following command to find cuid of those customers who have two or more than two shipments.
Select cuid , count(*) from Shipment where count(*)>=2;
However, the code gives an error. Explain the reason and write correct code to achieve the desired task.
- (ii) Reghu writes the following commands for another table **STUDENT**, having attributes roll, name, age and class.
Command1: Select count(*) from student;
Command2: Select count(age) from student;
He gets the output 10 for the first command but gets an output 8 for the second command. Explain the reason behind this difference.

(4)

13.

G.R.K International Inc. is planning to connect its Bengaluru Office Setup with its Head Office in Delhi. The Bengaluru Office of G.R.K. international Inc. is spread across an area of approx. 1 square kilometer, consisting of 3 blocks – Human Resources, Academics and Administration. You as a network expert have to suggest answers to the four queries (i) to (iv) raised by them.

(4)



Shortest distances between various blocks:

Human Resources to Administration	100 m
Human Resources to Academics	65 m
Academics to Administration	110 m
Delhi Head Office to Bengaluru Office Setup	2350 km

Number of computers installed at various blocks are as follows:

BLOCK	No. of Computers
Human Resources	155
Administration	20
Academics	100
Delhi Head Office	20

- (i) Suggest the most suitable block in the Bengaluru Office Setup, to host the server. Give reason.
- (ii) Suggest a suitable topology and draw the cable layout among the various blocks within the Bengaluru Office Setup for connecting the Blocks.
- (iii) Suggest a suitable networking device to be installed in each of the blocks for connecting computers inside the blocks with fast and efficient connectivity.
- (iv) Which hardware device should be installed to get internet access within the campus?
