

INSTRUCTIONS:

1. Programming Language: MYSQL

2. All questions are compulsory.

- Q1.** Consider the following SQL string : “Active Number” and write the command to display: **2**
 a. “Act”
 b. “Numb”

- Q2.** Write any one similarity and one difference between primary key and unique Constraint **2**

- Q3.** A relation ‘Item’ is given below: **3**

ItemNo	IName	Price	Qty
1001	Soap	60	120
1002	Powder	150	50
1003	Face Cream	220	50
1004	Scrub	160	25
1005	Soap Box	60	50
1006	Brush Holder	180	100

Write SQL commands to :

- (i) Display the Maximum price of each type of Product whose name starts with the letter ‘S’
- (ii) Count the total number of items quantity wise
- (iii) Display the Maximum and Minimum price of all items whose price is greater than 100

- Q4.** Consider the following dataframe ‘item’ and answer the following questions **3**

ItemNo	ItemName	ItemManufacturer	ItemPrice	ItemStock
121	Keyboard	Logitech	1800	100
122	Speaker	Bose	8500	80
123	Monitor	Panasonic	12000	200

- (i) Write a command to display the details of Keyboard
- (ii) Write a command to add a new row with the following data in dataframe **item**
(167,Keyboard,Quantnum,700,NULL)
- (iii) Write a command to display details of all the items that have price less than 5000

- Q5.** Consider a table Teacher that contains the following data: **5**

EmpNo	FName	LName	Subject	Qualification	Salary	Post
1	Sandeep	Verma	SSt	BEd.	25409.789	TGT
2	Sonia	Kumari	Computer	BCA	21200.456	TGT
3	Nirmal	Sharma	Hindi	BEd.	38274.657	PGT
4	Sanjeev	Shastri	Sanskrit	BEd.	28782.228	TGT
5	Rakesh	Sharma	English	BEd.	32892.487	PGT

Write the SQL queries using SQL functions to perform the following operations:

- a. To display Teacher’s first name where ‘ee’ occurs in the first name
- b. To join First Name and Last Name of the teachers with some space in between
- c. To display contents of Qualification field in small letters
- d. To display first 2 characters of the ‘Subject’ field
- e. To round off the Salary to the nearest integer

- Q6.** In a Database BANK there are two tables with a sample data given below: **3**

Table: EMPLOYEE

Eno	Ename	Salary	Zone	Age	Grade	Dept
1	Mona	70000	East	40	A	10
2	Muktar	71000	West	45	B	20
3	Nalini	60000	East	26	A	10
4	Sanaj	65000	South	36	A	20
5	Surya	58000	North	30	B	30

Table: Department

Dept	Dname	HOD
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10	Computers	1
20	Economics	2
30	English	3

Write SQL queries for the following questions:

- To display Eno, Ename, Salary and corresponding Dname of all the employees whose age is between 25 and 35 (both values inclusive)
- To display Dname and corresponding Ename from the tables Department and Employee (**Hint:** HOD of the Department table should be matched with Eno of the Employee table for getting the desired result.)
- To display Ename, Salary, Zone, and Income Tax
(**Hint:** Income Tax to be calculated as 30% of salary of all the employees with appropriate column headings.)

Q7. Table: BOOK INFORMATION

BOOK_ID	BOOK_TITLE	PRICE
101	CS	255
102	IP	356
103	IT	280

Table: SALES

STORE_ID	SALES_DATE	SALES_AMOUNT
25	02-10-2001	1520
31	15-12-2001	4520
45	21-12-2001	3300
60	01-01-2000	4000

Table: EXAM_RESULTS

STUD_ID	FNAME	LNAME	EXAM_ID	EXAM_SCORE
10	LAURA	LYNCH	1	90
10	LAURA	LYNCH	2	85
11	GRACE	BROWN	1	78
11	GRACE	BROWN	2	72
12	JAY	JACKSON	1	95
12	JAY	JACKSON	2	92
13	WILLIAM	BISHOP	1	70
13	WILLIAM	BISHOP	2	100
14	CHARLES	PRADA	2	85

Write the command for the following questions: (write any seven)

- To find the highest price form the table BOOK_INFORMATION **1**
- To find the sales_amount for each other. **1**
- To list all stores whose total sales amount is over 5000 **1**
- To find the total number of stores in the SALES table. **1**
- To find the total sales amount for store ID 25 and the total sales amount for store ID 45? **1**
- To find the average exam score for Exam_ID=1 **1**
- To find out how many students took each exam **1**
- To print out the record of all students whose last name starts with 'L' **1**