Set: C
Topic: SQL Advanced

National Institute of Technology Calicut
Department of Computer Science and Engineering
CS3095D DBMS Lab
Mid Term Test- 1

Time: 60 Minutes **Date: 14.09.2021** **Marks : 11**

Consider a production database for a company. The company consists of DIVISIONs, PERSONNEL, MACHINEs and different PARTS. The company has multiple divisions situated at different locations in India. These divisions are handled by a divisional manager. Each divisional manager has a group of persons working under him. A personnel working in the company can use a particular machine to produce a part. After a part is produced, its weight, color, and price is checked and noted down. Thus, the production of the company is a group effort by PERSONNEL, MACHINE, and the PART produced (i.e. a personnel uses a machine to produce a part). The database stores the quantity of parts produced on a daily basis. There is at least one personnel in each division. One personnel is always part of only one division and can be manager of only one division. One machine can only be used by one division (it can also be inoperative). There are no more restrictions concerning the relationships. The relational schema of the database is given below:

DIVISION

div_id	div_name	div_place	div_mgr_id

PERSONNEL

pid	pname	pdesignation	div_id	pmgr_id

MACHINE

mid	mmake	mtype	mname	mperformance	div_id	eid

PARTS

eid	ename	eweight	ecolor	eprice

PRODUCTION

pid	mid	eid	qty	price

Answer the following questions:

1. Write an SQL query to find the no. of machines associated with each division. (0.5 marks)

2. Write an SQL query to find the names of personnels who produced parts with id ‘E1’ using EXISTS. (0.5 marks)
3. Write an SQL query to list the personnel name associated with the production date ‘dd-mm-yyyy'. (1.5 marks)

4. Find the names of the personnels who produces a red or a green part. (1.5 marks)

5. Write an SQL query to find the dates in which maximum number of parts are produced. (1.5 marks)

6. Write an sql query to find the ID of the personnel who produced the maximum number of parts.(Any parts) (1.5 marks)

7. Write an sql query to find the name of the personnel who produced the maximum parts. (2 marks)

8. Write an SQL query to find the personnel names who used only one type of machine in the production process. (2 marks)