**Coimbatore Institute of Technology - Coimbatore**

**Department of Computer Science and Engineering**

**15CI07 – DATABASE MANAGEMENT SYSTEM**

**ASSIGNMENT -1**

**DATE: 29.01.2020**

**SECTION I**

**(ANSWER ALL THE QUESTIONS)**

1. The Motor Vehicle Branch administers driving tests and issues driver's licenses. Any person who wants a driver’s license must first take a learner's exam at any Motor Vehicle Branch in the province. If he/she fails the exam, he can take the exam again any tine after a week of the Jailed exam date, at any branch. If he passes the exam, he is issued a license (type = learner’s) with a unique license number. A learner's license may contain a single restriction on it. The person maytake his driver’s exam at any branch any time before the learner’s license expiry dates (which is usually set at six months after the license issue date). 1f he passes the exam, the branch issues him a driver's license. A driver's license must also record if thedriver has completed driver's education, for insurance purposes.

Create an E-R diagram following these steps.

1. Find-out the entities in the spec.
2. Find out the relationships among the entities
3. Figure out attributes of the entities and (if any) of the relationships
4. Figure out constraints between entities and relationships.
5. Check to see if you don't miss anything in spec.
6. Explain about database languages.
7. Explain about entity relationship model.
8. Explain with an example about major components of entity-relationship

Diagrams.

**SECTION II**

**(ANSWER ANY 30 QUESTIONS)**

1. List the components of ER Diagram.
2. Difference between generalization and specialization.
3. Define database.
4. Define database management system.
5. What is the goal of a DBMS?
6. What is a database application?
7. What is the function of a DBMS?
8. What is purpose of database system?
9. What is meant by database schema?
10. List out the types of schema.
11. Give the types of relationships?
12. Give an example for 1: 1 relationship.
13. Give an example for 1: M relationship.
14. Give an example for M: M relationship.
15. Define query.
16. Define query language.
17. List out the major components of DBMS system architecture.
18. What are the main components of Entity-Relationship diagram?
19. Define entity set.
20. Define relationship set.
21. Define unary relationship? Give an example.
22. Define binary relationship? Give an example.
23. Define ternary relationship? Give an example.
24. Define quaternary relationship? Give an example.
25. Define degree of the relationship set.
26. List out the types of attributes.
27. Define simple attributes. Give an example.
28. Define composite attributes. Give an example.
29. Define single-valued attributes. Give an example.
30. Define multi-valued attributes. Give an example.
31. Define derived attributes. Give an example.
32. Define mapping cardinalities or cardinality ration.
33. Define the mapping cardinalities one-to-one? Give an example.
34. Define the mapping cardinalities one-to-many? Give an example.
35. Define the mapping cardinalities many-to-one? Give an example.
36. Define the mapping cardinalities many-to-many? Give an example.
37. Define candidate key. Give an example.
38. Define primary key. Give an example.
39. Define alternate key. Give an example.
40. Define composite key. Give an example.
41. Define weak entity and strong entity.
42. Define participation constraints.
43. Give the limitations of E-R Model? How do you overcome this?