

DBMS Question Bank

Unit I

Introduction to Database Management Systems and ER Model

Q. NO.	QUESTIONS	MARKS
1)	Compare DBMS and File processing system in terms of data isolation, data redundancy, data inconsistency, data integrity.	[4]
2)	A reputed general hospital has decided to computerize their operations. In the hospital many doctors are working. Personal information of doctors is maintained to get them fixed salary per month. The patients are admitted to the hospital into the room. They are treated by various doctors. Sometimes patients perform certain pathological tests which are carried out into the labs. Identify the relationship among the entities along with the mapping cardinalities, keys in the E.R. diagram. Construct appropriate tables for E-R diagram designed with above requirements.	[7]
3)	A weak entity set can always be made into a strong entity set; by adding to its attributes the primary key attributes of its identifying entity set. Outline what sort of redundancy will result if we do so while converting it to tables.	[4]
4)	What is Specialization and generalization in Extended E-R diagram? What is the difference between them? Why do we not display the difference in schema diagram?	[7]
5)	Draw architecture of DBMS system and explain function of following components: [8] i) ii) Storage manager Query Processor	[8]
6)	Draw the neat diagram of Database System Structure and explain its components in detail.	[8]
7)	Construct an ER Diagram for Company having following details: • Company organized into DEPARTMENT. Each department has unique name and a particular employee who manages the department. Start date for the manager is recorded. Departments may have several locations. • A department controls a number of PROJECT. Projects have a unique name, number and a single location. • Company's EMPLOYEE name, ssno, address, salary, sex and birth date are recorded. An employee is assigned to one department but may work for several projects (not necessarily controlled by her dept). Number of hours/week an employee works on each project is recorded, The immediate supervisor for the employee. • Employee's DEPENDENT are tracked for health insurance purposes (dependent name, birthdate, relationship to employee). Identify the relationship among the entities along with the mapping cardinalities, keys in the E.R. diagram	[8]
8)	Explain the advantages of DBMS over normal file system in detail.	[8]
9)	Explain in detail the different levels of abstraction.	[4]
10)	Explain various Data model used in DBMS.	[6]

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- 11) What is meant by Mapping Cardinality? Explain different types of Cardinalities for a binary relationship with example. [4]
- 12) Explain the distinct among the Primary key, foreign key Candidate key and super key. [4]
- 13) Construct an E-R diagram for a car insurance company that has a set of customers each of whom owns one or more cars. Each car has associated with it zero to any number of recorded accidents. [5]
- 14) Construct an ER Diagram for a banking database System. Consider various entities such as Account, Customer, Branch, Loan, Deposit, Borrower etc. Design Specialization and generalization EER Feature. [5]
- 15) Construct an ER Diagram for a travel Agency. Consider various entities such as travel agency, passenger, Branch, seat, bus, employee, tour etc. design specialization and Generalization EER Feature. 5