

Q. P. Code : 32479

Time: 3 hours

Marks: 80



- N.B. : (1) Question Number 1 is compulsory
 (2) Solve any three Questions from the remaining.
 (3) Make suitable assumptions if needed

1. (a) Construct an E-R diagram for a Library Management System. Convert the E-R Diagram to Tables. 10
 (b) Explain Authorization in SQL. 5
 (c) List four significant differences between file processing system and database management system 5
2. (a) Explain Types of Integrity Constraints with example. 10
 (b) Write SQL queries for the given database 10
- Employee(eid, emp-name, street, city)
 Works(eid, cid, salary)
 Company(cid, comp-name, city)
 Manager (eid, manager-name)
- (i) Find the names of all the employees having 'S' as first letter in their Names
 (ii) Display the annual salary of all the employees.
 (iii) Find the name, street and city of all employees who work for "Accenture" and earn more than 30,000.
 (iv) Give total number of employees
3. (a) What is an attribute? Explain different types of attributes with examples. 10
 (b) What is Normalization? Explain 1NF, 2NF, 3NF and BCNF. 10

4. (a) Explain following terms with examples 10
- (i) Weak Entity Set
 - (ii) Data Independence
 - (iii) Extended ER features
 - (iv) Total and Partial participation
- (b) Explain any five Relational Algebra Operators in detail. 10
- 5 (a) What is Transaction? Discuss the ACID properties of Transaction. 10
- (b) Describe the Overall architecture of DBMS with suitable Diagram. 10
- 6 (a) Explain log based recovery. 10
- (b) Write a note on 10
- 1) Armstrong axioms
 - 2) Thomas write rule
