



School of Digital Health

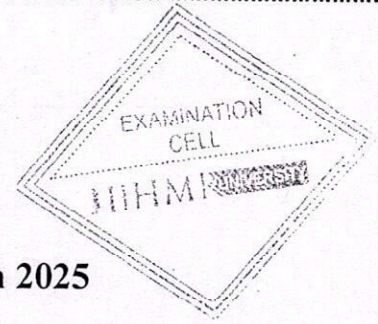
MBA Healthcare Analytics

Batch-01st (2024-2026)

First Year, Term 2, End Term Examinations, March 2025

CC – 611 Database Management System

Enrolment No.:



Time - 3 Hour

Maximum Marks: 50 (Minimum Marks: 20)

Instructions to students:

- This question paper contains 2 printed page.
- Don't write anything on the Question Paper except writing your Enrolment No.

Part A

(Maximum Marks: 5)

Q1. Choose the correct option/ Fill in the blanks / One-word / True & False / Match the following (1 mark each):

- a) Which of the following is not a type of database model?
- a) Relational
 - b) Hierarchical
 - c) Network
 - d) Computational
- b) The process of organizing data to minimize redundancy is called _____.
- c) In the ER model, a weak entity set requires a strong key attribute for identification.
- d) Match the following:
- | | |
|--------|------------------------------------|
| a) 1NF | i) Removes partial dependency |
| b) 2NF | ii) No repeating groups |
| c) 3NF | iii) Removes transitive dependency |
- e) What does DFD stand for in database modelling?

Part B

(Maximum Marks: 15)

Answer the following questions (5 marks each):

- Q2. Create a table with hypothetical data as per questions
- a) Write an SQL query to create a table named Patients with columns Patient_ID, Patient_Name, Age, and Disease.
 - b) Insert at least three records into the Patients table.
 - c) Retrieve records where Age is greater than 40.
 - d) Fetch records where Disease is either 'Flu' or 'Cold'.
 - e) Group the patients based on Disease and count the number of patients per disease.
- Q3. Discuss the importance of backup and recovery in database security. What strategies can be used for risk mitigation?

- Q4. Explain the ER model with a healthcare-related example. How does it help in designing a well-structured database?

Part C

(Maximum Marks: 30)

Answer the following questions in detail (10 marks each):

- Q5. ABC Pharma, a leading pharmaceutical company, is facing inefficiencies in its supply chain due to improper demand forecasting and inventory management. This has resulted in frequent stockouts and delays in medication delivery. The company plans to implement an advanced SCM system to streamline its operations.

- What are the key benefits of implementing an SCM system for ABC Pharma?
- How can real-time data analytics improve demand forecasting?

- Q6. **Normalization Problem:** Consider the following table:

Patient_ID	Patient_Name	Doctor_ID	Doctor_Name	Disease	Hospital
101	John Doe	D1	Dr. Smith	Flu	CityMed
102	Alice Brown	D2	Dr. Adams	Cold	HealthCare
103	Bob White	D1	Dr. Smith	Fever	CityMed

Normalize this table up to 3NF and explain each step.

- Q7. **DFD Question:** Draw a Level 0 Data Flow Diagram (DFD) for a Hospital Management System, considering patient registration, appointment booking, and billing.

