

Reg. No.:



Y8024

Name:

University of Kerala

Fourth Semester FYUGP Degree Examination, May 2026

Discipline Specific Core Course

COMPUTER SCIENCE

UK4DSCCSC200 - Database Management System

Academic Level: 200-299

2024 Admission

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

**Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark
Each.Answer all questions**

Qn No.	Question	CL	CO
1	List any two types of Functional Dependencies.	RE	4
2	List three commands used in DDL.	RE	2
3	Explain mapping cardinalities	UN	3
4	Explain data redundancy.	UN	1
5	List the different functional dependencies	UN	4
6	Describe the Hierarchical model.	UN	1

Part B. 8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Explain the difference between specialization and generalization in ER modeling.	UN	3
8	Explain integrity constraints.	UN	2
9	Illustrate the database design process.	AP	4
10	Illustrate the functions of DBA.	AP	1

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) Illustrate the concepts of Data models with suitable examples. OR B)	AP	1, 1

Qn No.	Question	CL	CO
	Illustrate in details the operations SELECT, PROJECT and UNION with suitable example?		
12	A) Analyse the impact of functional dependencies on the decomposition of a relation OR B) Analyse different attributes used in ER model.	AN	3, 3
13	A) Given a relation with functional dependencies, assess whether decomposition is lossless and dependency preserving. OR B) Evaluate a given un normalized relation with repeating groups. Decide whether normalization up to 3NF or BCNF is necessary and explain your reasoning with examples.	EV	4, 4
14	A) Create an ER diagram for a university database that stores information about students, courses, and faculty. Include appropriate entity sets, attributes, relationships, and cardinalities. OR B) Create an ER diagram with entities Customer and Order having a one-to-many relationship, explain how you would convert it into relational schema. Include primary and foreign keys in your explanation.	CR	3, 3