

KRISHNA KANTA HANDIQUI STATE OPEN UNIVERSITY

PGDCA 2nd Sem. Examination, 2015

Paper Code: PGDCA (S2) 08

Paper : Fundamentals of Database Management System (Theory)

Time: 2 hours Maximum marks: 50

The figures in the margin indicate full marks for the questions

- 1 Answer any five questions from the following : $2 \times 5 = 10$
- What are the advantages of distributed DBMS?
 - What do you mean by data integrity?
 - What is derived attribute? Give suitable example.
 - Define cardinality ratio?
 - Define candidate key. Give suitable examples.
 - Differentiate prime and non-prime attribute with appropriate examples.
 - What are the benefits of normalization?
- 2 Answer any two questions from the following : $4 \times 2 = 8$
- What do you mean by degree of a relationship type? Give diagrammatic representation of a binary and ternary relationship.
 - What are the advantages of relational model? What are the integrity constraints associated with relational model?
 - Give a pictorial representation of the ANSI/SPARC three-tier database architecture. What do you mean by logical data independence?
- 3 Answer any two questions from the following : $6 \times 2 = 12$
- What is the importance of functional dependencies in database design? Explain partial dependency with a suitable example.
 - Discuss the procedure of converting E-R model into relational schema.
 - Discuss the causes of database failure.
- 4 Answer any two question from the following : $10 \times 2 = 20$
- Describe the different types of file organization techniques.
 - Design an ER diagram for student management system in a university consisting of student, Departments, and Courses. Clearly highlight the entities, the relationship, the primary keys and the mapping constraints.
 - What are the Codd's rules for RDBMS? Explain any four of them.