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COLLEGE OF COMMERCE AND ECONOMICS
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Goa Vidyaprasarak Mandal's
Gopal Govind Poy Raiturcar College of Commerce and Economics
Farmagudi, Ponda-Goa.

B.C.A. (Semester - III) Examination – October 2014

DATABASE MANAGEMENT SYSTEMS

Duration : 2 hours

Marks : 50

Instructions : A.) All the questions are compulsory.
B.) Draw neat diagrams with pencil wherever required.

- I. 1. State whether the following statement are True or False. (1mk x 5 = 5 mks)
- a) Anomalies can occur in relations in BCNF if there is more than one multi-valued dependency.
 - b) A schedule S is view serializable if it is not view equivalent to a serial schedule.
 - c) Multiple users cannot hold shared locks simultaneously.
 - d) Open Database Connectivity provides a standard software interface for accessing DBMS.
 - e) A primary key that consists of two or more attributes is known as composite key.
2. Answer the following. (1mk x 5 = 5 mks)
- a) What is DDL?
 - b) What are DBMS capabilities?
 - c) What is Conceptual level?
 - d) What is Data Mining?
 - e) What is Declarative DML?
- II. 1. Explain the Good Decomposition with an example. (2 mks)
2. Explain the two types of Data Independence. (3 mks)
3. Explain the various properties of ACID. (5 mks)

- III. 1. Explain the Database Design Approach. (2 mks)
2. Explain the two processes involved in the Distributed Databases. (3 mks)
3. Explain the Object-Oriented Data Model. (5 mks)
- IV. 1. Explain that a Transitive Dependency is a Functional Dependency. (2 mks)
2. Explain the Referential Integrity with an appropriate example. (3 mks)
3. Explain the required procedure to convert a 2NF into a 3NF with an appropriate example. (5 mks)
- V. 1. Explain the Knowledge Databases. (2 mks)
2. Explain the two possible scenarios that distribute the Mobile Databases. (3 mks)
3. GOOGLE – a IT giant company, undertakes various types of projects. Employees work in the company under various projects. Each employee works on at least one project. Each employee has a designation in the company. An employee can work on more than one project. Each project has a project leader.
Taking the above information into consideration, identify and write the entities, attributes, relationships and types of keys involved for GOOGLE company and then, draw the corresponding ER Diagram. (5 mks)
