

Goa Vidyaprasarak Mandal's
Gopal Govind Poy Raiturcar College of Commerce and Economics
Farmagudi, Ponda-Goa.

B.C.A. (Semester - III) Examination – October 2016

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 statements are True or False. (1mk x 5 = 5 mks)
- a) Declarative DML is also called Non-Procedural DML.
 - b) A candidate key is a column in a table which has the ability to become a primary key.
 - c) A table is in fourth normal form if and only if it is in BCNF and contains no more than one MVD.
 - d) In Cascading rollback, a single transaction failure does not lead to a series of transaction rollbacks.
 - e) Lock and Unlock requests are not handled by the Lock Manager.
2. Answer the following. (1mk x 5 = 5 mks)
- a) What is DDL ?
 - b) What is File Oriented System ?
 - c) What are DBMS Capabilities ?
 - d) What is Data Mining ?
 - e) What is ODBC ?
- II. 1. Explain the Database Design Approach. (2 mks)
2. Explain the Duplication Process in the Distributed Database. (3 mks)
3. Explain the Object-Oriented Data Model. (5 mks)

- III. 1. Explain the Partial Dependency with an example. (2 mks)
2. Explain the Referential Integrity with an appropriate example. (3 mks)
3. Explain the Boyce-Codd Normal Form with an appropriate example. (5 mks)
- IV. 1. Explain the Lossless Decomposition with an example. (2 mks)
2. Explain the types of data supported by the Multimedia Database. (3 mks)
3. Explain the various properties of ACID. (5 mks)
- V. 1. Explain the Mobile Database. (2 mks)
2. Explain the comparison between the Logical Data Independence and the Physical Data Independence. (3 mks)
3. YAHOO – a IT company, undertakes various types of projects. The company has many employees. Employees are permanent and temporary. Each employee has a designation and belongs to at least one department. Each department has a head to see the functioning of the respective department. The company allows each employee to work on more than one project.
Considering the above information, identify and write the entities, attributes, types of keys involved and relationships for YAHOO company and then, draw the corresponding ER Diagram. (5 mks)
