

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

B.C.A. (Semester - III) Examination – October 2012

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. Select the correct option and rewrite the statement. (1mk x 5 = 5 mks)
- i. _____ DML require a user to specify what data are needed and how to get those data.
 - (a) Non Procedural
 - (b) Declarative
 - (c) Procedural
 - ii. Building → Campus, so Building is the _____ for Campus.
 - (a) Dependant
 - (b) Determinant
 - (c) Multi dependant
 - iii. Transitive dependency can occur only in relation of _____ attributes.
 - (a) 3 or more
 - (b) less than 2
 - (c) 2
 - iv. DML means _____
 - (a) Data Merge Language
 - (b) Data Manipulation Link
 - (c) Data Manipulation Language
 - v. Due to loss of information, decomposition is called _____ decomposition.
 - (a) Lossless
 - (b) Lossy
 - (c) Less
2. Answer the following. (1mk x 5 = 5 mks)
- i. What is Structural Independence ?
 - ii. What is Cascading Rollback ?
 - iii. What is Locking Protocol ?
 - iv. What is Polymorphism ?
 - v. What is Client-Server Model ?

- II. 1. Explain the types of Database Users. (2 mks)
2. Explain the comparison between Logical Data Independence and Physical Data Independence. (3 mks)
3. Explain the difference between Network Model and Relational Model. (5 mks)
- III. 1. Explain the Replication Process in Distributed Database. (2 mks)
2. Explain the comparison between Entity Integrity and Referential Integrity. (3 mks)
3. Explain the ACID Properties. (5 mks)
- IV. 1. Explain and draw the Dependency Diagram for 1NF and 2NF with an example. (2 mks)
2. Explain the Multimedia Database and the types of data it supports. (3 mks)
3. "BCNF is a stricter form of 3NF" – Explain this statement and with an example show the necessary tables in 3NF and then in BCNF. (5 mks)
- V. 1. Explain the Mobile Database. (2 mks)
2. Explain – "Modeling on the Physical Level involves adding Platform Specific detail to the model". (3 mks)
3. FLY BIRD - Insurance Company, runs its insurance business for 3 types of policies. The policies are child life insurance, retired life insurance and health insurance. The FLY BIRD is considered to be the best insurance company and has various branches. A policy holder of a FLY BIRD insurance company can hold any number of policies. The policy can be individual or joint.
- Based on the above information, identify and write the entities, attributes, relationships and types of keys for FLY BIRD – Insurance Company and then, draw the corresponding ER Diagram. (5 mks)
