



UNIVERSITY EXAMINATION 2012/2013

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF INFORMATION TECHNOLOGY

BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

VIRTUAL CAMPUS

UNIT CODE: BIT 2102 UNIT TITLE: DATABASE SYSTEMS

DATE: MARCH 2013

MAIN EXAM

TIME: 2HRS

Answer Question One and any other Two Questions.

1. a) Explain the following. (4 Marks)
 - i. Conceptual design.
 - ii. Logical design.

- b) Define the following terms. (4 Marks)
 - i. Data management.
 - ii. End-user data.
 - iii. Database.
 - iv. DBMS

- c) Define types of entity conversions. (4 Marks)
- d) Explain the components of E/R model. (6 Marks)
- e) Explain different types of entity relationship, use examples. (6 Marks)
- f) What is aggregations. (2 Marks)
- g) State and explain four relation keys used in DSMS. (4 Marks)

2. a) A transaction use a lock to deny data access to other transactions. Explain two types of locks. (6 Marks)
- b) Explain various forms of authorizations to database that a user can have. (6 Marks)
- c) The various provisions if database system may make authorization have insufficient protection in such cases data may be encrypted. Explain properties if a good encryption techniques. (8 Marks)
3. a) Discuss various classifications of DBMS. (12 Marks)
- b) Explain the three clauses of a basic SQL Expressions. (6 Marks)
- c) What is logical data interdependence? (2 Marks)
4. a) Using a case scenario draw E/R diagram. (10 Marks)
- b) With examples explain the different cordinality ratios. (10 Marks)
5. a) Discuss advantages of database system compound to fix system. (10 Marks)
- b) Define normalization and with examples explain three levels of normaltreton. (10 Marks)