



(Knowledge for Development)

KIBABII UNIVERSITY

(KIBU)

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

**SPECIAL/SUPPLEMENTARY EXAMINATIONS
YEAR ONE SEMESTER ONE EXAMINATIONS**

**FOR THE CERTIFICATE IN
(INFORMATION TECHNOLOGY)**

COURSE CODE : ITC 012
**COURSE TITLE : INTRODUCTION TO
DATABASE**

DATE: 21/07/2022 TIME: 8.00 A.M.-10.00 A.M.

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSARY) [24 MARKS]

- a) What is a database? [2 marks]
- b) What is a database system? [2 marks]
- c) What is SQL in full? [2 marks]
- d) Outline any four things that a database system allows users to do. [4 marks]
- e) Outline any four database examples you know. [4 marks]
- f) Outline the stages of an information system. [4 marks]
- g) Define the following database terms. [6 marks]

QUESTION TWO [18 MARKS]

- a) What is hardware in database? [2 marks]
- b) What are procedures in database? [2 marks]
- c) What is a Rational Database Management system? [2 marks]
- d) List two examples of databases management systems. [2 marks]
- e) Outline six advantages of a rational database management system. [7 marks]
- f) Outline three disadvantages of a database management system. [3 marks]

QUESTION THREE [18 MARKS]

- a) With the use of a diagram describe the levels of a database architecture [8 marks]
- b) Outline the stages of a database development life cycle [10 marks]

QUESTION FOUR [18 MARKS]

- a) What is an entity? [2 marks]
- b) What is an entity model? [2 marks]
- c) What does an entity model comprises of? [2 marks]
- d) What is an attribute? [2 marks]
- e) What is an attribute domain? [2 marks]
- f) What is a relationship? [2 marks]
- g) What is a degree of a relationship?
- h) List and explain any three relationships types you know and give out examples [6 marks]

QUESTION FIVE [18 MARKS]

- a) What is Normalization? [2 marks]
- b) List any two main levels of normalization? [2 marks]
- c) Explain three advantages of normalization. [6 marks]
- d) What is un-normalized form? [2 marks]
- e) When do we say a form is in: [6 marks]
- i. First normal form
 - ii. Second normal form
 - iii. Third normal form