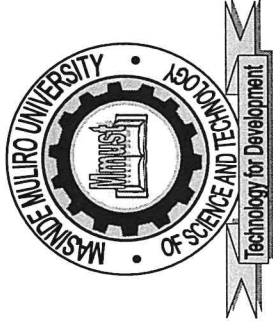


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(University of Choice)

MASINDE MULIRO UNIVERSITY OF

SCIENCE AND TECHNOLOGY

(MIMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

SECOND YEAR FIRST SEMESTER EXAMINATIONS

FOR THE CERTIFICATE IN:

INFORMATION TECHNOLOGY

COURSE CODE: ITC 012

COURSE TITLE: INTRODUCTION TO DATABASE.

DATE: 27/02/2022

TIME: 12:00 – 2:00PM

DURATION: 1 HOUR 30 MINUTES

MMMUST observe Zero tolerance to examination cheating

INSTRUCTIONS Answer ALL questions in section A and any THREE in section B;

SECTION A: 24 MARKS ANSWER ALL QUESTIONS

- a. Define the term database and identify its main features. 5 Mks
- b. Define the term relational database schema (the schema of a whole relational database). 4 Mks
- c. Define the term relation schema key. List the properties of a relation schema key. 3 Mks
- d. Define the term foreign key. List the properties of a foreign key. 3 Mks
- e. What is a data manipulation language used for? 2 Mks
- f. List the components (sublanguages) of the relational language SQL. 3 Mks
- g. What is the difference between a Relation and a Relation Schema? 2 Mks
- h. What is a “key” in the Relational Model? 2 Mks

SECTION B (40 MKS) Attempt any Three questions

1. Explain the data abstraction in Database Management environment. Illustrate using the ANSI-SPARC architecture. 18 Mks
2. Explain any **six** functions of DBMS. 18 Mks
3. Explain the following terms.
 - a) Denormalization 6 Mks
 - b) Third Normalization form 6 Mks
 - c) Outline THREE limitations of File management systems 6 Mks
4. Describe the **THREE** components of an Entity Relationship Model and illustrate each with examples. 18 Mks

END

MMMUST observe Zero tolerance to examination cheating