



# **GRETSA UNIVERSITY - THIKA**

## **UNIVERSITY EXAMINATIONS MAY - AUGUST 2023 SEMESTER**

### **DIPLOMA IN LIBRARY AND INFORMATION SCIENCE**

**COURSE CODE: DIRM 020**

**COURSE TITLE: DATABASE MANAGEMENT**

**DATE: 31 JULY 2023**

**TIME: 11:30 AM – 2:30 PM**

#### **INSTRUCTIONS TO CANDIDATES**

1. SECTION A IS **COMPULSORY**.
2. SECTION B: ANSWER ANY OTHER **THREE** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

**CAUTION:** *All exam rooms are under CCTV surveillance during the examination period.*

## **SECTION A: COMPULSORY**

### **QUESTION ONE**

Daniel has been tasked to design a database management System for a software company:

- a) Discuss **two** factors that Daniel needs to consider before selecting a storage medium for the database management System [10 Marks]
- b) Discuss **five** possible benefits that the company is likely to realise after implementation of the database management System [10 Marks]
- c) Explain **three** components of a database management System [10 Marks]
- d) Explain **five** qualities of a good database management System [10 Marks]

## **SECTION B: ANSWER ANY THREE QUESTIONS**

### **QUESTION TWO**

- a) Discuss **two** scenarios where a view can be helpful in a database management system [10 Marks]
- b) Explain why it is not always possible to perform SQL UPDATE/DELETE/INSERT statements on top of a view [10 Marks]

### **QUESTION THREE**

- a) Discuss **five** roles of a database administrator. [10 Marks]
- b) Briefly describe two reasons for normalizing a database [10 Marks]

### **QUESTION FOUR**

- a) Explain the meaning of database integrity [5 Marks]
- b) Discuss **three** security steps you would put in place to protect the integrity of data in the database [15 Marks]

### **QUESTION FIVE**

James wants to design a database for a given set up. Discuss all the steps in the database design cycle that he is supposed to follow [20 Marks]

### **QUESTION SIX**

- a) Explain **two** applications of a database management system in a records center. [10 Marks]
- b) Distinguish between MYSQL and SQL [10 Marks]