



Kasarani Campus

Off Thika Road  
Tel. 2042692 / 3

P.

O. Box 49274, 00100

NAIROBI

Westlands Campus  
Pamstech House  
Woodvale Grove  
Tel. 4442212  
Fax: 4444175

**KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR**  
**END SEMESTER EXAMINATION**  
**FOR THE DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY**  
**DIT 1007 – DATABASE MANAGEMENT SYSTEM**  
**SPECIAL**

Date: 16<sup>TH</sup> AUGUST 2023  
Time: 11:30AM – 1:30PM

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

- a) In an organization, an employee is identified by a unique employee number, salary and telephone number. Each employee works in a department. Each department is managed by an employee and is identified by a department number, name and budgetary allocation. Each employee may have a dependent child that is identified by employee number, name and age.
- i) Draw an ER diagram to represent the narrative (10 Marks)
  - ii) Discuss five types of users of database management systems in organizations (10 Marks)
  - iii) Discuss any challenges that organizations in implementing database management systems (10 Marks)

**QUESTION TWO (20 MARKS)**

- a) Explain the disadvantages of File Processing System (10 Marks)
- b) Explain the roles of different types of database users (10 Marks)

**QUESTION THREE (20 MARKS)**

- a) Define and transaction and explain the life cycle of a transaction (10 Marks)
- b) Describe the responsibilities of a database administrator. (10 Marks)

**QUESTION FOUR (20 MARKS)**

- a) Discuss any five areas where databases are used in an organization (10 Marks)
- b) Discuss any five measures that can be taken to ensure that databases are secure (10 Marks)

**QUESTION FIVE (20 MARKS)**

- a) Discuss the relational data model as used in database management systems (5 Marks)
  - b) Using a diagram, distinguish between a client server and distributed database architecture (5 Marks)
- (5 Marks)
- c) Explain the functions of a database administrator (5 Marks)
  - d) Describe the components of a relational database (5 Marks)

