



TECHNICAL UNIVERISTRY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN ELECTRICAL & ELECTRONIC ENGINEERING
(DEEE 2)

EEE 2103: COMPUTER PROGRAMMING

END OF SEMESTER EXAMINATION

SERIES: APRIL 2015

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions.

Attempt question **ONE (Compulsory)** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One (Compulsory)

- a) Define the following terms:
(i) Database
(ii) Relation
(iii) File **(3 marks)**
- b) (i) State TWO types of databases **(2 marks)**
(ii) Explain any THREE advantages of using the database approach over traditional file systems **(6 marks)**
- c) With the aid of suitable diagrams, describe the following network topologies:
(i) Star topology
(ii) Linear topology
(iii) Ring topology **(9 marks)**

Question Two

- a) (i) Define programming **(1 mark)**
(ii) Outline FIVE qualities of a good program **(5 marks)**
- b) Briefly explain the programming development lifecycle **(14 marks)**

Question Three

- a) Describe the procedure for performing the following tasks in Ms Access 2007 **(10 marks)**
(i) Creating a table in design view
(ii) Creating a query using query wizard
- b) With the aid of a suitable sketch, explain the THREE main program control structures **(10 marks)**

Question Four

- a) Briefly describe any FOUR categories of programming languages **(12 marks)**
- b) Differentiate between:
(i) Compiler and interpreter
(ii) Source code and target code **(8 marks)**

Question Five

- a) (i) State FOUR characteristics of a LAN **(4 marks)**
(ii) Explain the following network architectures:
(i) Peer to peer
(ii) Client server **(4 marks)**
- b) (i) Define an algorithm **(1 mark)**
(ii) State the functions of any THREE flowchart symbols **(3 marks)**
(iii) Write an algorithm for calculating the sum of 3 numbers entered by the user, and display the results **(5 marks)**
- c) State THREE advantages of using fiber optic over copper cable **(3 marks)**

