



# TECHNICAL UNIVERSITY OF MOMBASA

---

*Faculty of Engineering and Technology*

DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING

UNIVERSITY EXAMINATIONS FOR DIPLOMA IN TECHNOLOGY (ELECTRICAL &  
ELECTRONIC ENGINEERING)

EEE 2103

COMPUTER PROGRAMMING

END OF SEMESTER EXAMINATION

**SERIES: AUGUST 2019**

**TIME: 2 HOURS**

**DATE:**

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of **five** Questions

Attempt any **THREE** Questions.

**Do not write on the question paper.**

---

**QUESTION ONE**

- (a) Explain any **THREE** functions of presentation software (6 marks)
- (b) Explain any **TWO** word processors and give **ONE** example in each case. (8 marks)
- (c) Explain the function of any **THREE** types of spreadsheet. (6 marks)

## QUESTION TWO

- (a) Explain the following terms as used in computer networks:
- (i) Ethernet
  - (ii) Segment
  - (iii) Hub
  - (iv) Router
- (8 marks)
- (b) Explain any THREE characteristics of the following networks
- (i) LAN
  - (ii) WAN
- (6 marks)
- (c) Describe the steps necessary for making a RJ-45 plug termination of an Ethernet cable.  
(6 marks)

## QUESTION THREE

- (a) State any THREE functions of a DBMS (3 marks)
- (b) Explain any FOUR components of a DBMS (8 marks)
- (c) With the aid of a diagram explain the three-tier architecture of a DBMS  
(6 marks)
- (d) Explain the following terms:
- (i) Entity
  - (ii) Relation
  - (iii) Relationship
- (3 marks)

## QUESTION FOUR

- (a) Define the following terms
- (i) Programming language
  - (ii) Compiler
  - (iii) Interpreter
- (6 marks)
- (b) Explain FOUR factors to consider when choosing a programming language  
(8 marks)
- (c) Explain the THREE types of programming languages and give ONE example in each case.  
(6 marks)

## QUESTION FIVE

- (a) With the aid of diagrams explain the systems:
- (i) Client- server
  - (ii) Peer-to-peer
- (6 marks)
- (b) Explain the THREE database normal forms (8 marks)
- (d) Explain FOUR database relationships: (6 marks)