



# Technical University of Mombasa

*Faculty of Engineering and Technology*  
**DEPARTMENT OF MEDICAL ENGINEERING**

DIPLOMA IN MEDICAL ENGINEERING  
(DME Y1 S1)

**EIT 2101**  
**COMPUTER APPLICATIONS**

END SEMESTER EXAMINATIONS

**SERIES:** DECEMBER, 2013  
**TIME:** 2 HOURS

**INSTRUCTIONS TO CANDIDATES:**

- This paper consists of **FIVE** questions
  - Answer **ANY THREE** questions.
- This paper consists of **3 PRINTED** pages

## QUESTION ONE

- (a) Give any other **THREE** outstanding differences between a computer and a calculator apart from physical sizes, power supply type and key board /pad. **(6 marks)**
- (b) Define the following terms as applied to computing:-
- (i) Computer terminal
  - (ii) Computer system
  - (iii) Cursor
  - (iv) Pointer
  - (v) RSI **(6 marks)**
- (c) (i) Describe the bottom-up and the top-down programming approach
- (ii) For each of the approaches in (i), state **one** merit and **ONE** demerit **(8 marks)**

## QUESTION TWO

- (a) (i) List the resulting categories if computers are classified according to year of manufacture and complicity.
- (ii) State the technology in each of the categories in (i) **(10 marks)**
- (b) Describe the following input devices
- (i) Ergonomic keyboard
  - (ii) Scroll-wheel **(4 marks)**
- (c) List **SIX** areas of application of medical software. **(6 marks)**

## QUESTION THREE

- (a) (i) Categorize computers according to the type of electronic signals used to carry data and circuitry in them
- (ii) Explain each category in (i) above **(9 marks)**
- (b) Describe the following types of printers.
- (i) Impact
  - (j) Laser
  - (k) Inkjet **(8 marks)**
- (c) Define the term WEB SITE and explain how it is identified in the web. **(3 marks)**

#### QUESTION FOUR

- (a) (i) Name the **THREE** parts of the computer CPU  
(ii) Explain the function of each of the parts in (i) above **(9 marks)**
- (b) Explain the functions of the following software  
(i) System software  
(ii) Utility programs **(6 marks)**
- (c) State **THREE** demerits of using database management systems. **(3 marks)**
- (d) Explain the logical view of data **(2 marks)**

#### QUESTION FIVE

- (a) (i) Define the term buffer  
(ii) Explain the need of buffering in computer systems **(3 marks)**
- (b) State the activities in each of the following functions of computer operating system.  
(i) Job control  
(ii) Memory management. **(8 marks)**
- (c) With the aid of a sketch, describe the optical fibre method of data transmission **(9 marks)**