



TECHNICAL UNIVERISTY OF MOMBASA

# Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:  
BACHELOR OF SCIENCE IN CIVIL ENGINEERING  
BACHELOR OF SCIENCE IN ELECTRICAL & ELECTRICAL  
ENGINEERING  
(BSCE/BSEE)

**EEE 2174/SMA 2174: INTRODUCTION TO COMPUTER SCIENCE**

SPECIAL/SUPPLEMENTARY EXAMINATION

**SERIES: MARCH 2014**

**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** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

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**Question One (Compulsory)**

- a) Explain FIVE ways that computers have impacted on the contemporary society. **(5 marks)**
- b) Draw a labeled block diagram of a functional computer system and explain the functions of each component. **(6 marks)**
- c) Differentiate between the following computer terms:
- (i) Analog and digital computers **(2 marks)**
  - (ii) Data and information **(2 marks)**
  - (iii) RAM and ROM **(2 marks)**
  - (iv) Hardware and software **(2 marks)**
- d) Explain how computers are applied in the following areas:

- (i) Supermarkets
  - (ii) Banks
  - (iii) Law enforcement agencies
- (6 marks)**

- e) Define proof reading a document. State tools used in proofreading in word processing. **(3 marks)**
- f) Explain the following actions: **(2 marks)**
- (i) Double click
  - (ii) Drag

### **Question Two**

- a) Explain the various computer generations **(10 marks)**
- b) TUM is in the process of automating the examination system. Advise on the factors the University may consider while outsourcing hardware for setting up the system. **(10 marks)**

### **Question Three**

- a) The central processing and peripheral devices of a computer system are coordinated by the operating system. Explain SIX functions of an operating system. **(6 marks)**
- b) State FIVE functions of DBMS software **(5 marks)**
- c) Differentiate between a multiuser and single user operating systems, giving examples in each case. **(4 marks)**
- d) Explain FIVE registers in the central processing unit. **(5 marks)**

### **Question Four**

- a) Define utilities and state any FOUR utility programs **(6 marks)**
- b) Differentiate between EPROM and EEPROM. **(4 marks)**
- c) You are required to recommend a programming language and an application software package. Explain FIVE software selection criteria. **(10 marks)**

### **Question Five**

- a) State any FIVE advantages of networking in an organization. **(5 marks)**
- b) Describe the following with reference to input/output devices:
- (i) Optical Character Recognition (OCR) **(3 marks)**
  - (ii) Magnetic Ink Character Recognition (MICR) **(3 marks)**
- c) Explain THREE services offered by internet service provider (ISP) **(3 marks)**
- d) Explain the following terms: **(6 marks)**
- (i) Intranet
  - (ii) Internet
  - (iii) Extranet