



## TECHNICAL UNIVERSITY OF MOMBASA

### EXAMINATION RUBRIC

---

SERIES : DECEMBER2016

FACULTY : Institute of Computing and Informatics

DEPARTMENT : Select department

CLASS :  
BSEE/16S/J+FT-(EEE) BACHELOR OF SCIENCE  
ELETRICAL  
ENGINEERING

Type class Name Type class Name

Type class Name Type class Name

MODE OFFERED : Type class Name Type class Name  
Departmental paper

UNIT CODE : COMP4112: FUNDAMENTALS OF COMPUTING  
Type unit code : Type unit name.  
Type unit code : Type unit name.

EXAM DURATION : 2 Hours

NO. OF STUDENTS : 50

DATE OF SUBMISSION: Pick Date Dec 2016

### INSTRUCTIONS TO CANDIDATES

The paper consists of Choose Nochoose Sect/Quest. Attempt Choose instruction.

NAME OF SETTER : JEFWA NGOMBO SIGNATURE: \_\_\_\_\_

NAME OF MODERATOR : \_\_\_\_\_SIGNATURE:\_\_\_\_\_

EXAM TWO



---

**TECHNICAL UNIVERSITY OF MOMBASA**  
**INSTITUTE OF COMPUTING AND INFORMATICS**

Select department

**UNIVERSITY EXAMINATION FOR:**  
**BACHELOR OF SCIENCE ELECTRICAL ENGINEERING**  
**COMP4112: FUNDAMENTALS OF COMPUTING**  
**END OF SEMESTER EXAMINATION**  
**SERIES: DECEMBER 2016**

**TIME: 2 HOURS**

**DATE: Pick Date Dec 2016**

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of Choose No questions. Attempt Choose instruction.

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

---

**Question ONE**

- A) Distinguish between a computer device and a calculator (2 marks)
- B) Identify and distinguish the categories of computers in terms of processing performance, size, secondary storage capacity, and application (10 marks)

- C) The following components determine the processing performance of a computer.  
Explain the meaning of their terms, their function and units of measure of performance :
- (i) Processor,(ii) RAM, (iii) processor cache, (iv) type of processor design. (8 marks)
- D) Explain the meaning of software applications (2 mark)
- E) Identify any four software applications and explain their use (8 marks)

## Question TWO

- a) Explain the various forms of data representation and organization from physical to logical levels. (10 marks)
- b) (i) explain the term input device in computing
- (ii) Identify and explain input devices for the following forms of input data and source: direct input of character data, capture of text document for editing, photo image capture, video capture, a map document for editing, direct capture of voice, input from music instrument ( 10 marks)

## Question THREE

- a) (i) Explain the binary representation and use of the following number system in computing: Denary, Binary and hexadecimal (6 marks)
- (ii) Character A is represented by decimal code no 65. In the ASCII. Convert this code into binary form using ASCII (4 marks)
- b) Explain the meaning mobileApp and describe the functions and use of any four mobileApp software ( 5 marks)
- c) Explain the meaning of social networking application software and describe respective function and use of any four such software. (5 marks)

## Question FOUR

- a) Explain the meaning of the following types software by use and describe their respective functions and one example for each type:
- (i) operating system ( 6 marks)

- (ii) utility software ( 4 marks)
- b) explain the difference between intranet and extranet (4 marks)
  
- c) Explain the any three software tools for computer maintenance (6 marks)

**Question FIVE**

- a) Explain the steps in the process of computer program development (5 marks)
  
- b) Explain the meaning of computer algorithm (1 marks)
- c) Explain any four programming tools (8 marks)
  
- d) Use of computers entails the taking of precautions against some associated threats. Identify and briefly explain three security requirements and one example measure against a threat in computing. (6 marks)