



TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:
BACHELOR OF COMMERCE (BCOM 13S/M)

EIT 4101: FOUNDATION OF COMPUTER SYSTEMS

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2013

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

Question One (Compulsory)

- a) By citing a example in each case, classify computers based on the type of data which they can manipulate or according to technology **(9 marks)**
- b) “Computes are very important in an organization”. Justify this statement by giving FOUR functions of a computer facility within an organization **(4 marks)**
- c) A student has bought a computer for use at home. An integrated software package was supplied along with the computer. The integrated package had word processing, database, spreadsheet and art modules.
- State the purposes of each module the student may use it for **(4 marks)**
 - Give TWO advantages of an integrated package over each separate module. **(2 marks)**
 - The student also wanted to play games using the computer. State the input devices that the student can use play games. **(2 marks)**

- d) Explain FIVE reasons why computer systems requires secondary storage (5 marks)
- e) Differentiate between the TWO types of booting processing (4 marks)

Question Two

- a) Explain THREE types of storage memory found in a computer system (6 marks)
- b) Computerizing business operations may require the users of the computers to be trained. State clearly FOUR reasons for training employees on how to use computers (4 marks)
- c) Explain FOUR limitations of magnetic tapes as secondary storage devices (4 marks)
- d) Explain how a cache memory helps in improving the overall processing speeds of a computer system. (6 marks)

Question Three

- a) What do you understand by the term “portable computer system” (2 marks)
- b) Write short notes on the following items: (8 marks)
- (i) Mouse
 - (ii) Trackball
 - (iii) Joystick
 - (iv) Touch screen
- c) Using a well labelled diagram, identify the hardware components in modern computer systems and their roles in processing information. (10 marks)

Question Four

- a) Perform the following computations
- (i) $1010_2 * 101_2$ (3 marks)
 - (ii) $2567_8 + 3476_8$ (3 marks)
 - (iii) $1110_2 \ 1_2 \ 1110_2$ (2 marks)
- b) By giving an example in each case, explain TWO basic functions of a processor (4 marks)
- c) Explain FOUR sources of computer viruses. (8 marks)

Question Five

- a) State TWO uses of a UPS.
- b) Explain FOUR precautions that should be observed when handling magnetic media. (4 marks)
- c) As a person with knowledge about application software, and assuming that you have been called to advise on the same, explain fully any FOUR factors that the business should consider so as to buy the most appropriate application packages. (8 marks)
- d) Describe FOUR uses of a home computer (4 marks)