**TECHNICAL UNIVERISTY OF MOMBASA**

# Faculty of Engineering & Technology

**DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY**

**UNIVERSITY EXAMINATION FOR DEGREE IN:**
BACHELOR OF COMMERCE
BACHELOR OF BUSINESS ADMINISTRATION
(BCOM/BBA 14S – Y1 S1)

**EIT 4101: FUNDAMENTALS OF COMPUTER SYSTEMS**

END OF SEMESTER EXAMINATION
**SERIES:** DECEMBER 2014
**TIME:** 2 HOURS

<u>**Instructions to Candidates:**</u>
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions. Attempt question **ONE (Compulsory)** 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 an example in each case, classify computers based on the type of data which they can manipulate or according to technology. **(9 marks)**

**b)** "Computers 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, spreadsheets and Art modules:
    **(i)** State the purpose of each module the student may use it for. **(4 marks)**
    **(ii)** Give TWO advantages of an integrated package over each separate module **(2 marks)**
    **(iii)** The student also wanted to play games using the complete. State the input devices that the student can use to play games **(2 marks)**

**d)** Explain FIVE reasons why computer system requires secondary storage **(5 marks)**

**e)** Differentiate between the TWO types of booting process **(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 main 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:
   **(i)** Mouse
   **(ii)** Trackball
   **(iii)** Joystick
   **(iv)** Touch screen **(8 marks)**

**c)** Using a well labeled diagram, identify the hardware components in a modern computer systems and then 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)** $11101_2 - 1110_2$ **(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 **(2 marks)**

**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 advice 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 SIX uses of a home computer **(6 marks)**