



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972 – 60200, Meru – Kenya.

Tel. 020-2069349, 061-2309217, 064-30320. Cell phone:+254 712524293, +254 789151411

Fax: 064-30321

Website: www.mucst.ac.ke Email: info@mucst.ac.ke

University Examinations 2013/2014

FIRST YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE INFORMATION TECHNOLOGY

BIT 2102: COMPUTER SYSTEMS AND ORGANIZATION

DATE: APRIL 2014

TIME: 2 HOURS

INSTRUCTIONS: Answer question one **COMPULSORY** and any other two questions

QUESTION ONE (30 MARKS)

- a) Illustrate and explain the workings of the following devices:
- i. Processor registers (2 marks)
 - ii. The organization of a CPU (2 marks)
- b) Give the difference between the following:
- i. Memory Vs storage (2 marks)
 - ii. ROM Vs RAM (2 marks)
 - iii. Bits Vs Bytes (2 marks)
- c) Explain the usage and classification of the following types of printers:
- i) Laser. (2 marks)
 - ii) Dot matrix (2 marks)
 - iii) Inkjet (2 marks)
 - iv) Daisy Wheel (2 marks)
 - v) Plotters (2 marks)
- d) Define a computer buss and describe the different types of computer buses. (5 marks)
- e) Identify and explain the various eras in the history of computing. (5 marks)

QUESTION TWO (20 MARKS)

- a) Define the following terms:
- i. Data (2 marks)
 - ii. Computer (2 marks)

- iii. Software (2 marks)
 - iv. Source code (2 marks)
 - v. Information (2 marks)
- b) Identify and explain the various classes of computers. (5 marks)
- c) With the use of a diagram discuss the components within the CPU. (5 marks)

QUESTION THREE (20 MARKS)

- a) Briefly explain the bootstrap process during the loading of an operating system.(4 marks)
- b) Explain THREE types of systems files that are necessary in order that Windows/DOS operating systems can run. (4 marks)
- c) State THREE possible basic functions that an operating system might provide for handling I/O devices. (4 marks)
- d) Name TWO categories of computer viruses and describe their payload. (4 marks)
- e) What is fragmentation and what does de-fragmenting a drive do? (4 marks)

QUESTION FOUR (20 MARKS)

- a) Explain the term machine cycle and, state and explain the actions that take place during the machine cycle. (5 marks)
- b) Distinguish between op-code and operand. (5 marks)
- c) Computers or processors are described in terms of word-length, speed and the capacity of their associated primary storage. Define these properties. (5 marks)
- d) Explain the meaning of the following terms as used in the computer systems:
- i. EBCDIC (1 mark)
 - ii. LCD (1 mark)
 - iii. TCP/IP (1 mark)
 - iv. UNIVAC (1 mark)
 - v. ASCII (1 mark)