TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:
BACHELOR OF TECHNOLOGY IN ANALYTICAL CHEMISTRY
BACHELOR OF SCIENCE IN LABORATORY SCIENCE

(BTAC/BLS/BPH)

ECS 4101: INFORMATION TECHNOLOGY I

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 **THREE** printed pages

Question One (Compulsory)

a) Describe FUR coding schemes relevant for data representation in computing **(8 marks)**

b) Citing their roles in promoting specific needs of the end user, outline FIVE personal productivity software tools **(10 marks)**

c) Outline SIX factors that should be considered during hardware selection. **(6 marks)**

d) Differentiate between a worm and a computer virus giving examples in each case. **(6 marks)**

Question Two

a) Explain the role played by the following components within a computer system.
  (i) Input
  (ii) Output
  (iii) Control unit
  (iv) Arithmetic Logic Unit
  (v) Cache **(10 marks)**

b) The diagram below gives a schematic representation of computer software:

A

Identify the parts labeled A, B C & D and give ONE example of each **(8 marks)**

c) Distinguish between analog computers and digital computers **(2 marks)**

Question Three

a) Discuss FOUR significant technological improvements in the computer era. **(4 marks)**

b) What does the following acronyms stand for:
  (i) RISC
  (ii) DOS
  (iii) EEPROM
  (iv) WORM
  (v) CISC
  (vi) RAM **(6 marks)**

c) Explain the impact of the following in computer performance
  (i) Word size
  (ii) Clock speed
  (iii) Cache size **(6 marks)**

d) Explain the purpose of the following icons in windows desktop
  (i) My Network Places
  (ii) My Computer
  (iii) Recycle bin

(iv) Internet Explorer   **(4 marks)**

Question Four

a) There are various criteria used to classify computers. One of them is based on size, cost performance and number of users they support. List and clearly explain the main classes of computers using this criterion.   **(10 marks)**

b) Differentiate between internal memory and external memory giving one example of each.
                                                                             (6 marks)

c) Why do organizations prefer database technology as a way of organizing information?
                                                                             (4 marks)

Question Five

a) (i) Explain some of the basic applications of extranet in an organization.   **(6 marks)**

   (ii) What are the potential risks associated with uses of extranets   **(6 marks)**

b) Discuss any FOUR areas sectors where computers are applied stating their major functional importance.   **(8 marks)**