



**DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY**

**University Examinations 2014/2015**

**FIRST YEAR SEMESTER II SPECIAL/SUPPLEMENTARY  
EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN  
MECHATRONICS**

**SMA 2174: INTRODUCTION TO COMPUTERS**

**DATE: 29<sup>TH</sup> SEPTEMBER 2015**

**TIME: 11.00AM-1.00PM**

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***Instructions: Answer Question one and any other two Questions***

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**QUESTION 1: (30 Marks)**

- a) Define the following terms : (3 marks)
- i. Virtual memory
  - ii. Cold booting
  - iii. Qwerty
- b) State and explain two types of primary memory (4 Marks)
- c) Showing your working convert the following numbers to decimal and binary respectively. (4 Marks)
- i.  $1001111_2$
  - ii.  $114_{10}$
- d. Name four negative impacts of computer technology (4 Marks)
- e) State and explain three online application programs that can be used to market companies (6 Marks)
- f) John suspects that his computer has been infected by a virus and he needs your assistance to fix it.
- i. Define a computer virus: (1 Mark)

- ii. Outline any four symptoms of a computer virus. (4 marks)
- iii. Explain the measures you would adopt to safeguard your files from viruses. (4 marks)

**QUESTION 2: (20 Marks)**

- a) A CPU's design determines its basic speed, but other factors can make chips already designed for speed work even faster. Name and explain four factors (10 marks)
- b) Using examples name and briefly explain three types of ports and their use (6 Marks)
- c) You have just purchased a new laptop and you have been advised to partition the hard disk.
  - i. Define partitioning: (1 mark)
  - ii. Explain how it contributes to performance? (3 marks)

**QUESTION 3: (20 Marks)**

- a) Name and explain four utility programs and how they can be used to improve performance in an organization. (6 marks)
- b) "An operating system is a resource manager". Justify this statement using examples (4 marks)
- c) A Company has decided to adopt a Linux operating system for their new computers how will the company benefit from this decision? (4 marks)
- d) Compare and contrast three types of PC operating systems (6 Marks)

**QUESTION FOUR (20 Marks)**

- a) Define the following terms: (2 Marks)
  - i. Bandwidth
  - ii. Cookie
- b) Name two types of malware and the effects they have on the computer. (4 Marks)
- c) Using examples explain the impact the internet has on businesses (4 marks)
- d) Irene has just been given a document to edit explain to her how you would perform the following functions in Microsoft Word 2007

- i. Change the background color of a document (2 Marks)
- ii. Insert page numbers (2 Marks)
- iii. Correct a word that has been misspelt in the whole document. (3 Marks)
- iv. Protect your document with a password to open. (3 marks)

**QUESTION 5: (20 Marks)**

- a) Define the following terms (2 marks)
  - i. Packet
  - ii. Protocol
  - iii. Differentiate between an intranet and an extranet? (2 marks)
- b) State and explain four types of network topologies (4 marks)
  - i. John wants to set up a cyber that has 10 computers to provide internet services. Advise him on the following:
  - ii. State and explain the type of network to use and its advantages (6 marks)
  - iii. All the components that will be used to set up the network and their use (6 marks)