



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

**BACHELOR OF TECHNOLOGY IN INFORMATION COMMUNICATION TECHNOLOGY
YR I SEM I**

EIT 4103: PC HARDWARE & TROUBLESHOOTING

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: MAY/JUNE 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions

Answer any **THREE** questions. Question **ONE** is Compulsory

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

SECTION A (Compulsory - 30 marks)

Question One (30 Marks)

- a) Explain the following system tools used in computer maintenance
- i) Disk Manager
 - ii) Scan Disk
 - iii) Fdisk
 - iv) Disk Defragmenter (10 marks)
- b) Explain the essence of device manager to a technician (2 marks)
- c) VGA Drivers are reported to be missing in your computers.
- i) Explain the consequences of missing VGA drivers in your computers (2 marks)
 - ii) Explain the steps you would take to acquire the missing drivers (2 marks)
- d) Troubleshooting requires an organized and logical approach to solving problems in computers and other components, identify steps of troubleshooting a computer system. (5 marks)
- e) Explain how to troubleshoot the windows low virtual memory error messages (3 marks)
- f) Computers are prone to power malfunction problems, describe three basic standard devices used to protect computers from power related problems (6 marks)

SECTION B (Answer any TWO questions – 40 Marks)

Question Two (20 marks)

- a) Explain **SIX** common BIOS setup menu options (12 marks)
- b) Explain the essence of CMOS battery what are possible errors when the battery is low(4 marks)
- c) Explain the concept of Direct Memory Access (DMA) with respect to I/O device management. (4 marks)

Question Three (20 marks)

- a) Explain **FOUR** main functions of BIOS in a computer system (8 marks)
- b) Explain the cause of the following errors
 - i) CMOS checksum error
 - ii) CMOS memory size mismatches (4 marks)
- c) Which **FOUR** things should be investigated first when troubleshooting a printer. (4 marks)
- d) Describe software conflict and measures to dampen the problem (4 marks)

Question Four (20 marks)

- a) List and explain the **THREE** common installation errors (6 marks)
- b) List and explain any **THREE** types of disk partitions (6 marks)
- c) Differentiate between the following as related to computers
 - i) Cold boot and warm boot
 - ii) Case form factor and motherboard form factor (4 marks)
- d) Explain any **FOUR** additional NTFS Features not found in the earlier file systems (4 marks)

Question Five (20 marks)

- a) Every storage media in a computer system must have points of attachment to the mother board through IDE, SCSI, SATA and USB. Briefly discuss the **FOUR** major technologies used in mass storage points of attachment (12 marks)
- b) A colleague have asked you to format and install an open source operating system, list and explain any **FOUR** pre-installation check list. (8 marks)