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

<u>Instructions to Candidates:</u>
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)