



TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN INFORMATION COMMUNICATION
TECHNOLOGY (BTICT 13S)

EIT 4103: PC HARDWARE & TROUBLESHOOTING

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 (COMPULSORY)** 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) Differentiate between the following terms:
- (i) "Computer Hardware" and "Computer Software"
 - (ii) "Registry Values" and "Device Drivers"
 - (iii) "Random Access Memory" and "Read Only Memory" **(12 marks)**
- b) Explain the difference between the following terms:
- (i) "File attribute" and "file extension"
 - (ii) "Disk formatting" and "disk partitioning"
 - (iii) "Active partition" and "Extension partition"
 - (iv) "Graphical user interface" and "Textual User Interface" **(16 marks)**
- c) State the two file systems supported by windows 7/8/XP operating system **(2 marks)**

Question Two

- a) Categorizing computer faults is important when repairing a computer system. Explain the following types of faults you may encounter:
- (i) Hardware faults
 - (ii) Software faults
 - (iii) Configuration faults
- (6 marks)**
- b) (i) Explain the term “PC troubleshooting”
- (2 marks)**
- (ii) As a technician, a computer that is not working is brought to you. Write down any FIVE questions you would use to help in the process of troubleshooting
- (5 marks)**
- (iii) Explain to the owner of the computer in Q2 b(ii) above, the concept of “mean-time-to-failure”
- (2 marks)**
- c) State any THREE functions of Basic input/output system (BIOS)
- (3 marks)**
- d) Distinguish between “warm booting” and “cold booting”

Question Three

- a) Edgar pressed the function key (F8) as his computer was powering up and a menu pop up. Explain relevance of the following Windows start option modes:
- (i) Safe mode
 - (ii) Safe mode with command prompt
 - (iii) Last known configuration
 - (iv) Safe Mode with Networking support
- (8 marks)**
- b) Regardless of the complexity of an operating system, it performs the same FOUR basic functions: Explain the FOUR basic functions performed by an operating system.
- (8 marks)**
- c) State any FOUR types of data stored in the complementary metal oxide semi-conductor (CMOS) of a computer.
- (4 marks)**

Question Four

- a) As a technician, you are responsible for adding and removing software from your customer’s computer.
- (i) Explain the role of control panel in the context of the above statement. **(2 marks)**
 - (ii) Explain the term “Registry Cleaner” **(2 marks)**
- b) Explain the term upgrade with reference to:
- (i) Computer software
 - (ii) Computer hardware
- (4 marks)**
- c) Computers provide a mechanism by which I/O and memory modules may interrupt the normal processing of the processor:
- (i) Explain the term “Interrupt” **(2 marks)**
 - (ii) Discuss any FIVE types of interrupts **(8 marks)**

Question Five

a) Before installing any software application or operating system, certain hardware requirements must be met. Discuss any FIVE hardware requirements that one would check before installing Window 7. Justify each requirement. **(10 marks)**

b) For optimal performance of a computer prevent maintenance in paramount:

Required:

- (i) Explain the term “Preventive maintenance” **(2 marks)**
- (ii) Identify any FOUR important tasks performed by preventive maintenance **(4 marks)**
- (iii) List any FOUR benefits of preventive maintenance to individual users and organization. **(4 marks)**