



CICT PART I SECTION 2

COMPUTER SUPPORT AND MAINTENANCE

WEDNESDAY: 1 September 2021.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

QUESTION ONE

- (a) (i) Explain the term “dual booting”. (2 marks)
- (ii) List three boot devices. (3 marks)
- (b) Outline four factors which could determine the actual number of instructions that a processor can handle in a second. (4 marks)
- (c) Analyse the function of each of the following personal computer diagnostic testing and maintenance tools:
- (i) Lint-free cloth. (2 marks)
- (ii) USB-hub. (2 marks)
- (iii) Electrostatic discharge kit. (2 marks)
- (iv) Vacuum cleaner. (2 marks)
- (d) Highlight three symptoms of a failing computer power supply unit. (3 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Describe the operating principles of the following modern computer’s secondary storage drives:
- (i) Hard Disk Drives (HDDs). (3 marks)
- (ii) Solid State Drives (SSDs). (3 marks)
- (iii) Blu-ray optical drives. (3 marks)
- (b) Outline five roles of a computer technician in a computer laboratory. (5 marks)
- (c) Explain the meaning of the following settings indicated on the motherboard specifications:
- (i) Quick boot. (2 marks)
- (ii) Processor Serial Number. (2 marks)
- (iii) Input/Output voltage. (2 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Analyse the characteristics of each of the following computer virus attacks:
- (i) Boot sector. (2 marks)
- (ii) File allocation table. (2 marks)
- (iii) Multipartite. (2 marks)
- (iv) .com files. (2 marks)

- (b) Fatuma Saidi's computer keeps on locking up and re-booting after every five minutes.
- Required:**
- (i) Identify two possible causes of the problem. (2 marks)
- (ii) Suggest a possible solution to the problem identified in (b) (i) above. (2 marks)
- (c) Outline three examples of flat-panel monitors available in the market today. (3 marks)
- (d) Philip Maazo has installed a new processor in his computer. However, he has continued to experience slow processing and computer freezing. His computer has no virus and no excess programs.

Required:
Propose five possible actions that he could take to rectify the above problem. (5 marks)
(Total: 20 marks)

QUESTION FOUR

- (a) (i) Write the acronym "ASP" in full in relation to software acquisition. (2 marks)
- (ii) Discuss two advantages and two disadvantages of the method of software acquisition stated in (a) (i) above. (4 marks)
- (b) Analyse four steps followed when disassembling a hard disk drive. (4 marks)
- (c) Explain the implication of the following power supply terminologies:
- (i) Power good signal. (2 marks)
- (ii) Power supply loading. (2 marks)
- (iii) Power supply ratings. (2 marks)
- (d) Serah Maputo, a computer technician at Uzalendo College noted that the ports of one of the computer in the laboratory were working.

Required:
Suggest four areas the technician should check first in troubleshooting the problem. (4 marks)
(Total: 20 marks)

QUESTION FIVE

- (a) Sally Moraa, a computer technician in a certain organisation was required to develop a computer user manual guide.
- Required:**
Examine four guidelines that she could use during the development. (4 marks)
- (b) Propose three benefits of low profile extended (NLX) motherboard specification over other current low profile form factors. (6 marks)
- (c) Dan Maloko has been advised to enable automatic software updates settings of his laptop.
- Required:**
Suggest to him four reasons for installing software updates. (4 marks)
- (d) Describe each of the following parameters which define a computer memory module:
- (i) Width. (2 marks)
- (ii) Depth. (2 marks)
- (iii) Cycle time. (2 marks)
- (Total: 20 marks)**
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