



kasneb

CICT PART I SECTION 2

COMPUTER SUPPORT AND MAINTENANCE

THURSDAY: 28 November 2019.

Time Allowed: 3 hours.

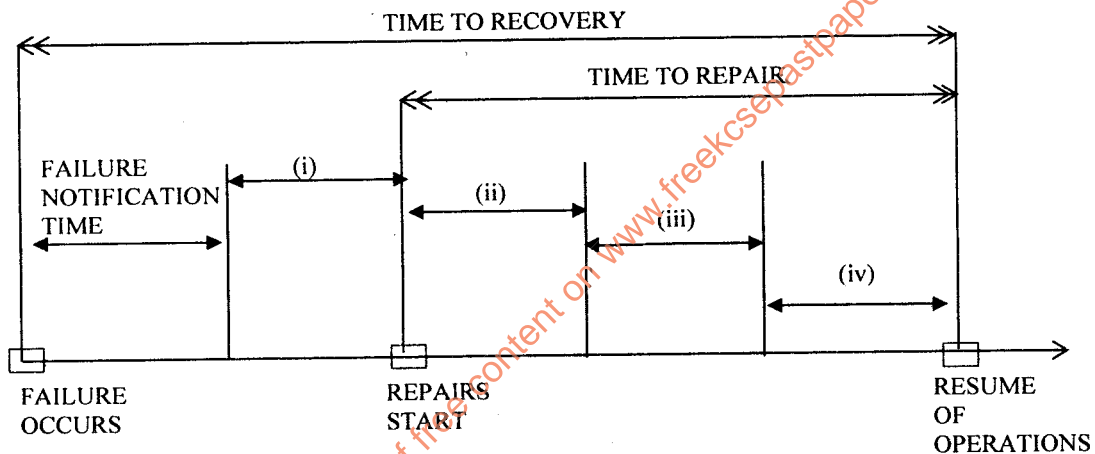
Answer ALL questions. Marks allocated to each question are shown at the end of the question.

QUESTION ONE

(a) (i) Define the term "single point of failure" as used in computer support and maintenance. (2 marks)

(ii) Suggest a solution to hardware single point of failure and software single point of failure. (2 marks)

(b) The diagram below shows computer repair and recovery operations:



Required:

Identify the processes labelled (i) to (iv) on the diagram. (4 marks)

(c) Jane Marita was printing a customer's job when her printer experienced paper jam.

Required:

Outline in four steps how to clear the paper jam from rear of the printer. (4 marks)

(d) (i) List three examples of flat panel displays available in the market. (3 marks)

(ii) Differentiate between "passive matrix" and "active matrix" technologies as used with computer display. (2 marks)

(e) Outline three processor features that affect performance and compatibility with motherboards. (3 marks)

(Total: 20 marks)

QUESTION TWO

(a) As a computer technician, you are concerned with e-waste management.

Explain the best ways to dispose of the following:

(i) Batteries used in digital cameras. (2 marks)

(ii) Computer monitors. (2 marks)

(iii) Hard drives. (2 marks)

- (b) (i) Propose three dangers of using a pirated software. (3 marks)
- (ii) Outline three ways of protecting a laptop against security attacks. (3 marks)
- (c) Explain five differences between IDE and SATA hard drive technologies. (5 marks)
- (d) You could sense unusual smell of something burning or overheating in a computer room.

**Required:**

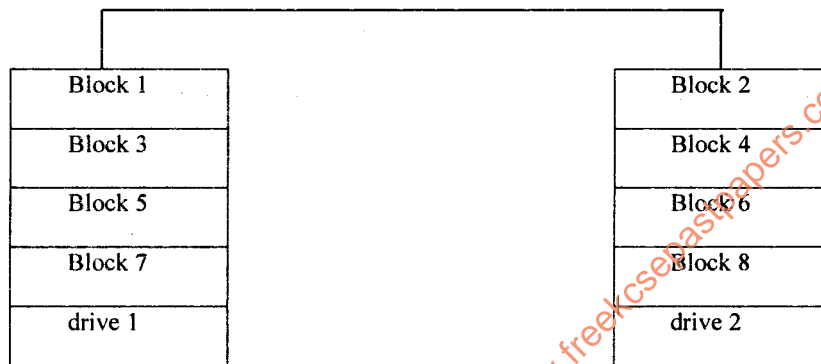
Suggest three things you could test without opening computer cases to troubleshoot the electrical system.

(3 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) (i) Define the term RAID as used with data storage devices. (2 marks)
- (ii) Describe the type of RAID depicted by the diagram below:



(2 marks)

- (iii) Highlight two advantages of using the RAID in (ii) above. (2 marks)
- (b) Tom Moseti intends to enhance the performance of his computer by upgrading the memory.

**Required:**

Propose four ways he would use to determine memory requirements before purchasing memory module. (4 marks)

- (c) Distinguish between “warranty length” and “warranty coverage” as used in computer system acquisition. (4 marks)
- (d) Explain in six steps how to replace a dead power supply unit. (6 marks)

**(Total: 20 marks)**

**QUESTION FOUR**

- (a) Explain each of the following terms in relation to computer memory:
  - (i) Memory address. (2 marks)
  - (ii) Memory dump. (2 marks)
- (b) Suggest four advantages of installing Linux operating system in the computer lab over other operating systems. (4 marks)
- (c) Distinguish between “expansion slots” and “ports” as used in motherboards. (4 marks)
- (d) Examine four different troubleshooting options for each of the following:
  - (i) Faulty mouse or touch pad. (4 marks)
  - (ii) Unrecognised DVD-ROM drive. (4 marks)

**(Total: 20 marks)**

**QUESTION FIVE**

(a) Explain the following classification of protective measures in computer security:

- (i) Prevention. (1 mark)
- (ii) Detection. (1 mark)
- (iii) Reaction. (1 mark)

(b) Argue three cases against online computer support. (6 marks)

(c) Henry Kioko has acquired a new laptop and he intends to install an operating system.

**Required:**

Advise him on six pre-installation tasks that he should undertake before installation of the operating system.

(6 marks)

(d) Suggest five reasons of upgrading a computer over purchasing a new one.

(5 marks)

**(Total: 20 marks)**

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