

KASNEB

CICT PART I SECTION 2

COMPUTER SUPPORT AND MAINTENANCE

PILOT PAPER

September 2015.

Time Allowed: 3 hours.

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

QUESTION ONE

- (a) (i) Describe display aspect ratio. (3 marks)
- (ii) Explain the acronym HDMI. (2 marks)
- (b) The 486 is a family of processors consisting of DX, SX and a number of others.
- Required:**
Briefly explain four features that make 486 processors approximately twice as fast as an equivalent MH₃ 386 chip. (8 marks)
- (c) State two features of active partition of a hard disk. (2 marks)
- (d) (i) Define the term memory mapping. (1 mark)
- (ii) Highlight four principle benefits of memory mapping. (4 marks)
- (Total: 20 marks)**

QUESTION TWO

- (a) Interpret the effects of having a smaller external bus and a larger data bus to the CPU. (4 marks)
- (b) Highlight three features of a plug and play device. (3 marks)
- (c) Explain how the following items of furniture and ergonomics could be set in order to accommodate the correct posture:
- (i) Computer user chair. (2 marks)
- (ii) Keyboard. (2 marks)
- (iii) Monitor. (2 marks)
- (d) (i) Identify four safe computer user practices. (4 marks)
- (ii) Highlight three reasons why a computer user might encounter problems after upgrading a processor. (3 marks)
- (Total: 20 marks)**

QUESTION THREE

- (a) (i) List two power supply protective devices. (2 marks)
- (ii) Highlight four advantages of protected mode of processor. (4 marks)
- (b) (i) Explain the term "repetitive strain injury". (2 marks)
- (ii) Explain how you would mitigate against repetitive strain injury in (b) (i) above. (4 marks)
- (c) Identify four weaknesses of a firewall. (4 marks)
- (d) Differentiate between "high level" and "low level" formatting as used in disks. (4 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) (i) List three internal parts of a hard disk. (3 marks)
- (ii) Analyse four methods of determining the speed of a hard disk. (4 marks)
- (b) (i) Define intermittent faults as used in computer support and maintenance. (2 marks)
- (ii) Explain four causes of intermittent faults. (4 marks)
- (c) List four key electrostatic sensitive components of a computer. (4 marks)
- (d) Many computer users have shifted from liquid crystal display (LCD) monitors to relatively new organic light emitting diode (OLED) monitors.

Required:

Suggest three reasons for the shift.

(3 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Differentiate between “headless installation” and “silent installation” as used in software installation. (4 marks)
- (b) Tom has a desktop computer that has the following characteristics; on booting, it beeps more than once and nothing appears on the screen.

Required:

Identify three possible causes of the problem.

(3 marks)

- (c) Identify four types of cards which when added to a computer enhances its capabilities. (4 marks)
- (d) (i) Explain the term application software virtualisation. (2 marks)
- (ii) Explain five benefits of application software virtualisation (5 marks)
- (e) Explain the term memory controller. (2 marks)

(Total: 20 marks)

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