

# KASNEB

## DICT LEVEL II

### COMPUTER SUPPORT AND MAINTENANCE

TUESDAY: 22 November 2016.

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 two main components of the video sub-system of a computer system. (4 marks)
- (ii) Citing one example of a video adapter, explain the role of video adapters in a computer. (4 marks)
- (b) (i) Describe the term “troubleshooting the power supply” of a computer system. (2 marks)
- (ii) Identify five problems which are often related to a computer power supply system. (5 marks)
- (c) Outline five ways of troubleshooting computer hardware after booting the computer system. (5 marks)

(Total: 20 marks)

#### QUESTION TWO

- (a) Highlight three duties of a computer support specialist in an organisation. (3 marks)
- (b) Citing a suitable example, describe each of the following computer upgrade types:
- (i) Feature upgrade. (2 marks)
- (ii) Reliability upgrade. (2 marks)
- (iii) Performance upgrade. (2 marks)
- (c) Complete the table below of computer audio error codes and their corresponding faults:

	Audio error code	Probable fault
(i)	Repeating short beeps	
(ii)	Two short beeps	
(iii)	One long and one short beep	
(iv)	One short beep/no display	

(1 mark)

(1 mark)

(1 mark)

(1 mark)

- (d) (i) Define the term “disk platter” as used in computer disks and drives. (2 marks)
- (ii) Make a sketch of a disk platter and label the main parts. (5 marks)

(Total: 20 marks)

#### QUESTION THREE

- (a) Describe six basic elements that could be used to gauge the performance and capability of central processing unit (CPU) of a computer system. (6 marks)
- (b) Analyse possible causes and troubleshooting techniques for each of the following computer problems:
- (i) System locks up during or shortly after Power On Self Test (POST). (4 marks)
- (ii) Monitor displays “no picture”. (4 marks)
- (c) Outline four factors that determine the degree of difficulty when recovering data from a hard drive. (6 marks)

(Total: 20 marks)

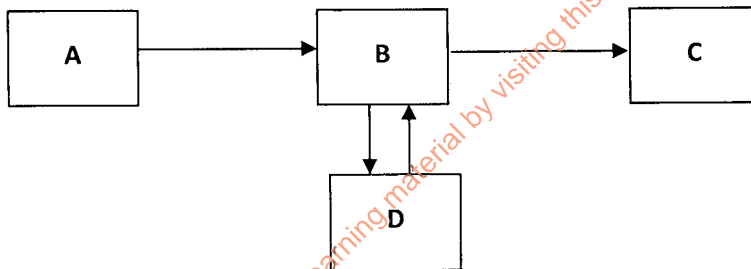
**QUESTION FOUR**

- (a) Summarise three symptoms of a computer vision syndrome that could be experienced by a computer user. (3 marks)
- (b) Describe six duties of a computer hardware engineer. (6 marks)
- (c) Explain the concept of a silent software installation. (2 marks)
- (d) Distinguish between a “Directory Table” and a “File Allocation Table” as used in computing. (4 marks)
- (e) Describe the following computer memory concepts:
  - (i) Shadow Random Access Memory (SRAM). (2 marks)
  - (ii) Direct Memory Access (DMA) channel. (2 marks)
  - (iii) Non volatile memory. (1 mark)

**(Total: 20 marks)**

**QUESTION FIVE**

- (a) Examine the role of the following motherboard components:
  - (i) Chipset. (3 marks)
  - (ii) Switches and jumpers. (3 marks)
- (b) Explain the term “CMOS” as used in computer motherboards. (2 marks)
- (c) Identify five capabilities of a biometric system in relation to computer security. (5 marks)
- (d) The following diagram illustrates the basic components of a computer system:



Describe the components named in the diagram. (4 marks)

- (e) Explain the role of “port” as used in a computer system. (3 marks)

**(Total: 20 marks)**

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