

KASNEB

ATD LEVEL I

DCM LEVEL I

INFORMATION COMMUNICATION TECHNOLOGY

TUESDAY: 23 May 2017.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Explain the following categories of personal computers:
- (i) Desktop computer. (2 marks)
 - (ii) Notebook computer. (2 marks)
 - (iii) Tablet computer. (2 marks)
- (b) Differentiate between “dynamic memory” and “static memory” as used in a computer system. (4 marks)
- (c) Highlight six ways in which the use of computers could reduce operating cost of a school. (6 marks)
- (d) Outline four benefits of using email as a means of communication in an organisation. (4 marks)
- (Total: 20 marks)**

QUESTION TWO

- (a) In the context of information systems, state five qualities of good information. (5 marks)
- (b) Explain the meaning of the following concepts of a computer file:
- (i) Hit rate. (2 marks)
 - (ii) Volatility. (2 marks)
 - (iii) Growth. (2 marks)
- (c) Distinguish between a “modem” and a “multiplexer” as used in computer networks. (4 marks)
- (d) Describe five factors to consider when selecting a computer programming language. (5 marks)
- (Total: 20 marks)**

QUESTION THREE

- (a) Highlight four business processes that could be supported by the use of computerised accounting software in an organisation. (4 marks)
- (b) Explain three functions of a power supply unit in a computer system. (6 marks)
- (c) Highlight four signs that could warn a user of an overheating computer. (4 marks)
- (d) Describe each of the following multiuser computers:
- (i) Server. (2 marks)
 - (ii) Mainframe. (2 marks)
 - (iii) Supercomputer. (2 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Explain the following terms as used in information security:
 - (i) Malware. (2 marks)
 - (ii) Spyware. (2 marks)
 - (iii) Worm. (2 marks)
 - (iv) Trojan. (2 marks)
- (b) Highlight four ways in which an operating system could be used to sort computer files. (4 marks)
- (c) Describe four features of each of the following information systems:
 - (i) Transaction Processing System (TPS). (4 marks)
 - (ii) Executive Support System (ESS). (4 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Outline four features that could determine the choice of appropriate smartphone for internet usage. (4 marks)
- (b) Differentiate between the following types of internet connections:
 - (i) "Dial-up internet" and "cable internet". (4 marks)
 - (ii) "Digital subscriber line (DSL)" and "Satellite internet". (4 marks)
- (c) Identify two hardware devices in each case that could be used to produce the following output:
 - (i) Soft copy. (2 marks)
 - (ii) Hard copy. (2 marks)
- (d) Highlight four disadvantages of a wide area network (WAN). (4 marks)

(Total: 20 marks)

QUESTION SIX

- (a) (i) Define the term "utility software". (2 marks)
- (ii) List three examples of utility software. (3 marks)
- (b) Explain three factors that influence Garbage In, Garbage Out (GIGO) in the context of data processing. (6 marks)
- (c) (i) Describe the role of a repeater in computer networking. (2 marks)
- (ii) State three advantages of star network topology. (3 marks)
- (d) Distinguish between "switch user option" and "log off option" as used in graphical user interface (GUI) operating systems. (4 marks)

(Total: 20 marks)

QUESTION SEVEN

- (a) Explain the meaning of the following wireless networking technologies:
 - (i) Bluetooth. (2 marks)
 - (ii) Infrared. (2 marks)
- (b) Outline two advantages and two disadvantages of dot matrix printers. (4 marks)
- (c) Explain three functions of control unit of a computer system. (6 marks)
- (d) Describe two types of flat panel display monitor. (4 marks)
- (e) List two examples of registers found within the central processing unit (CPU) of a computer. (2 marks)

(Total: 20 marks)

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