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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