



ATD LEVEL I

DCM LEVEL I

**INFORMATION COMMUNICATION TECHNOLOGY**

**TUESDAY: 27 November 2018.**

**Time Allowed: 3 hours.**

**Answer any FIVE questions.**

**ALL questions carry equal marks.**

**QUESTION ONE**

- (a) Outline four advantages that might accrue to an organisation from the purchase of bespoke software. (4 marks)
- (b) List five computer embedded devices that might be used in the home environment. (5 marks)
- (c) State the five stages in the information technology infrastructure evolution. (5 marks)
- (d) Analyse the purpose of the following software utilities:
  - (i) System status utilities. (2 marks)
  - (ii) Debuggers. (2 marks)
  - (iii) Dump utilities. (2 marks)

**(Total: 20 marks)**

**QUESTION TWO**

- (a) Describe two collision detection methods used in data transmission. (4 marks)
- (b) List four desirable features of notebook personal computers. (4 marks)
- (c) Contrast “optical character recognition” and “optical mark recognition” based on the following criteria:
  - (i) Application area. (2 marks)
  - (ii) What is recognised. (2 marks)
- (d) Distinguish between the following terms:
  - (i) “CRT monitor” and “LCD monitor”. (4 marks)
  - (ii) “Light pen” and “Joystick”. (4 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) Explain three reasons why a hotel might use M-commerce. (3 marks)
- (b) With the aid of a diagram, illustrate the open systems interconnections model (OSI). (7 marks)
- (c)
  - (i) Define the term “web browser”. (2 marks)
  - (ii) State two commonly used web browsers. (2 marks)

(d) Discuss the following e-payment methods:

- (i) Digital wallet. (2 marks)
- (ii) Smart card. (2 marks)
- (iii) Stored value payment system. (2 marks)

**(Total: 20 marks)**

**QUESTION FOUR**

- (a) Explain four reasons why images are used in the design of human computer interface (HCI). (4 marks)
- (b) Identify two examples of each of the following basis of classification of operating systems:
  - (i) The services they provide. (2 marks)
  - (ii) The interface that makes them available to users and programs. (2 marks)
- (c) Describe three documents created during mail merging in word processing. (6 marks)
- (d) Discuss the following methods used in computer memory allocation:
  - (i) Continuous allocation. (2 marks)
  - (ii) Linked allocation. (2 marks)
  - (iii) Indexed allocation. (2 marks)

**(Total: 20 marks)**

**QUESTION FIVE**

- (a) Highlight four problems that might occur if a software is not thoroughly tested before use. (4 marks)
- (b) Explain four guidelines of setting up a strong computer password. (4 marks)
- (c) Suggest four business processes that could be supported by spreadsheet software. (4 marks)
- (d)
  - (i) State four external sources of information for use in a decision support system. (4 marks)
  - (ii) Outline four types of reports produced by a decision support system. (4 marks)

**(Total: 20 marks)**

**QUESTION SIX**

- (a) State five precautionary measures taken to protect a compact disc from damage. (5 marks)
- (b) Identify five factors that you could consider when designing a method of file organisation. (5 marks)
- (c) Analyse five factors that might determine the type of network topology to be used by an organisation. (5 marks)
- (d) List five types of cybercrime. (5 marks)

**(Total: 20 marks)**

**QUESTION SEVEN**

- (a) State six basic types of desktop applications. (6 marks)
- (b) With the aid of diagrams, illustrate three types of charts that might be used to analyse business trends in spreadsheets. (6 marks)
- (c) Discuss four benefits that might accrue to banks from advancing loans through mobile phone platforms. (8 marks)

**(Total: 20 marks)**

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