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ATD LEVEL I

DCM LEVEL I

INFORMATION COMMUNICATION TECHNOLOGY

TUESDAY: 22 May 2018.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Identify six uses of information communication technology (ICT) in hospitals. (6 marks)
- (b) Citing an application of each in the context of the end user, distinguish between “information centre” and “help desk”. (6 marks)
- (c) Explain the meaning of the following terms used in reference to a computer file:
- (i) Hit rate. (2 marks)
 - (ii) Sort. (2 marks)
 - (iii) Append. (2 marks)
 - (iv) Seek. (2 marks)
- (Total: 20 marks)

QUESTION TWO

- (a) Explain the main function of the following:
- (i) Memory card. (2 marks)
 - (ii) Sound card. (2 marks)
 - (iii) Television tuner card. (2 marks)
- (b) Distinguish between the following types of software:
- (i) “Closed source software” and “open source software”. (4 marks)
 - (ii) “Alpha software” and “beta software”. (4 marks)
- (c) Describe the following characteristics of storage media:
- (i) Mutability. (2 marks)
 - (ii) Addressability. (2 marks)
 - (iii) Volatility. (2 marks)
- (Total: 20 marks)

QUESTION THREE

- (a) (i) Explain the term “conditional formatting” as used in spreadsheets. (2 marks)
- (ii) Highlight two benefits of electronic spreadsheets over manual worksheets. (2 marks)
- (b) Technology used to make the processors of computers has evolved over time.

Required:

Distinguish between a “second generation” and an “third generation” computers on the basis of the technology used to make their processors. (6 marks)

- (c) Discuss five types of operating systems. (10 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Distinguish between “structured decisions” and “unstructured decisions” as used in information systems. (4 marks)
 - (b) Describe the following types of management information system (MIS) reports:
 - (i) Summary report. (2 marks)
 - (ii) Exception report. (2 marks)
 - (iii) Statutory/scheduled report. (2 marks)
 - (c) (i) Explain the term “turnkey systems”. (2 marks)
 - (ii) Summarise four advantages of turnkey systems. (8 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Illustrate the following LAN topologies:
 - (i) Mesh. (2 marks)
 - (ii) Tree. (2 marks)
 - (iii) Star. (2 marks)
 - (b) Highlight six features of an accounting package. (6 marks)
 - (c) Describe four benefits of using wireless media in network connectivity. (8 marks)
- (Total: 20 marks)**

QUESTION SIX

- (a) (i) Explain the term “data/information privacy”. (2 marks)
 - (ii) Highlight three internet-related computer technologies that might threaten data/information privacy. (3 marks)
 - (iii) Recommend three measures that could be used to protect data/information privacy. (3 marks)
 - (b) Describe six methods that could be used to prevent unauthorised access to information in a computer within a networked environment. (6 marks)
 - (c) Explain the following web-related terms:
 - (i) Web browser. (2 marks)
 - (ii) Hyperlink. (2 marks)
 - (iii) Hypertext document. (2 marks)
- (Total: 20 marks)**

QUESTION SEVEN

- (a) (i) Define the term "executive support system (ESS)". (2 marks)
- (ii) Explain four internal factors that might drive the need for an ESS in an organisation. (8 marks)
- (b) Describe the following internet business models:
 - (i) Information broker. (2 marks)
 - (ii) Transaction broker. (2 marks)
 - (iii) Content provider. (2 marks)
- (c) Explain how the following factors affect the processing power of a computer:
 - (i) Data bus. (2 marks)
 - (ii) RAM size. (2 marks)

(Total: 20 marks)

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