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ATD LEVEL I

DCM LEVEL I

INFORMATION COMMUNICATION TECHNOLOGY

WEDNESDAY: 27 November 2019.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Examine five factors that could lead to the successful implementation of information communication technologies (ICT's) in small businesses. (5 marks)
- (b) Highlight two ways that could be used to reduce the threats in a computer through emails. (4 marks)
- (c) (i) Explain the term computer port. (2 marks)
- (ii) List two types of computer ports. (2 marks)
- (d) Using examples differentiate between a search engine and a web browser. (4 marks)
- (e) Explain the following components:
- (i) Network interface card. (1 mark)
- (ii) Modem. (1 mark)
- (iii) Twisted pair cable. (1 mark)

(Total: 20 marks)

QUESTION TWO

- (a) Suggest six actions which a company should take on a day-to-day basis to ensure as far as possible that data stored is secure and that processing can take place without disruption. (6 marks)
- (b) Describe four types of microcomputers. (4 marks)
- (c) Highlight four components of an information system. (4 marks)
- (d) (i) Define the term peripheral device. (1 mark)
- (ii) State an example of a peripheral device. (1 mark)
- (e) Using an example, distinguish between a field and a record as used in file management. (4 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Explain the following types of software:
- (i) Malware. (1 mark)
- (ii) Freeware. (1 mark)
- (iii) Shareware. (1 mark)
- (iv) Spyware. (1 mark)

- (b) Printers could be classified as impact printers and non-impact printers.
State two examples in each class of the above types of printers. (4 marks)
- (c) Compare read only memory (ROM) and random access memory (RAM) based on the following criteria:
- (i) Size. (2 marks)
 - (ii) Use. (2 marks)
- (d) Differentiate between multiprogramming and multiprocessing. (4 marks)
- (e) Citing an example, explain the term firmware. (2 marks)
- (f) List two components contained in a computer motherboard. (2 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Cite four reasons why a programmer may be hesitant to develop a program using first generation programming language. (4 marks)
- (b) Explain four factors that might affect the method of file organisation. (8 marks)
- (c) Describe the following word processing features:
- (i) Print preview. (2 marks)
 - (ii) Watermark. (2 marks)
 - (iii) Indent. (2 marks)
- (d) State two reasons why a graphical user interface (GUI) is considered easier to use than a command driven interface. (2 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Describe the following file processing activities:
- (i) File merging. (2 marks)
 - (ii) File sorting. (2 marks)
- (b) Assess four potential impacts of an attack on information systems. (8 marks)
- (c) Outline six disadvantages associated with the use of internet. (6 marks)
- (d) Explain the meaning of "knowledge workers" in the context of information systems. (2 marks)
- (Total: 20 marks)**

QUESTION SIX

- (a) Your organisation has invited an IT consultant to advice on the concept of cloud computing. The IT consultant said, "It is a great idea to embrace cloud computing but there are challenges associated with it".

Required:

- (i) Justify the need to embrace cloud computing in an organisation. (5 marks)
 - (ii) Assess five challenges associated with cloud computing. (5 marks)
- (b) Explain the following types of operating systems:
- (i) Time sharing operating system. (2 marks)
 - (ii) Real time operating system. (2 marks)
- (c) Enumerate six stages of data processing cycle. (6 marks)
- (Total: 20 marks)**

QUESTION SEVEN

- (a) State three metrics which could be used when evaluating hardware performance. (3 marks)
- (b) (i) State four automated data capture techniques that could be used by an organisation. (4 marks)
- (ii) List four precautionary measures taken when using automated data input techniques. (4 marks)
- (c) Identify four features of e-commerce. (4 marks)
- (d) (i) Define the term virtual private network (VPN). (1 mark)
- (ii) Explain four benefits that could accrue to an organisation as a result of deploying virtual private networks. (4 marks)

(Total: 20 marks)

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