
Answer any FIVE questions.

**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. 
   (ii) Use. 
(2 marks) 
(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. 
   (ii) Watermark. 
   (iii) Indent. 
(2 marks) 
(2 marks)
(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. 
   (ii) File sorting. 
(2 marks) 
(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. 
   (ii) Assess five challenges associated with cloud computing. 
(5 marks) 
(5 marks)

(b) Explain the following types of operating systems:
   (i) Time sharing operating system. 
   (ii) Real time operating system. 
(2 marks) 
(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.

(b) (i) State four automated data capture techniques that could be used by an organisation.

(ii) List four precautionary measures taken when using automated data input techniques.

(c) Identify four features of e-commerce.

(d) (i) Define the term virtual private network (VPN).

(ii) Explain four benefits that could accrue to an organisation as a result of deploying virtual private networks.

(Total: 20 marks)