

KASNEB

ATD LEVEL I

DCM LEVEL I

INFORMATION COMMUNICATION TECHNOLOGY

PILOT PAPER

September 2015.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Using a well labelled diagram, describe the flow of data, instructions and commands in a computer system. (7 marks)
- (b) Highlight five factors that determine the processing power of a computer. (5 marks)
- (c) Distinguish between an “application software” and a “system software”. (2 marks)
- (d) Identify two characteristics of:
- (i) First generation computers. (2 marks)
 - (ii) Second generation computers. (2 marks)
 - (iii) Third generation computers. (2 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Outline five functions of an operating system. (5 marks)
- (b) Distinguish between:
- (i) “DVD-RAM” and “CD-RW”. (4 marks)
 - (ii) “Virtual memory” and “cache memory”. (4 marks)
- (c) Outline three methods of e-payments. (3 marks)
- (d) State four advantages of using a database system rather than conventional file approach. (4 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Describe three types of messaging systems. (3 marks)
- (b) Outline four models of e-commerce. (4 marks)
- (c) Explain the meaning of the following expressions:
- (i) Assembly language is machine oriented. (2 marks)
 - (ii) High level languages are problem oriented. (2 marks)
 - (iii) Fourth generation languages are non-procedural languages. (2 marks)
- (d) List the characteristics of the following information systems:
- (i) Transaction processing systems. (3 marks)

- (ii) Decision support systems. (2 marks)
- (iii) Executive support systems. (2 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Explain the controls listed below as used in computer systems:
- (i) Audit trail. (2 marks)
- (ii) Biometric controls. (2 marks)
- (iii) Encryption. (2 marks)
- (iv) Digital signature. (2 marks)
- (v) Back-up. (2 marks)
- (b) Outline five features of an accounting software. (5 marks)
- (c) Highlight five reasons why an organisation may opt to set up a computer network. (5 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Describe two features of each of the following application softwares:
- (i) Word processing. (2 marks)
- (ii) Spreadsheets. (2 marks)
- (iii) Database package. (2 marks)
- (b) Outline four factors to consider when choosing/designing the methods of file organisation. (4 marks)
- (c) Highlight two factors to consider when acquiring a computer software. (2 marks)
- (d) Examine three ways in which the internet can be useful to a business. (3 marks)
- (e) Identify five factors to consider in the selection of data transmission media. (5 marks)
- (Total: 20 marks)**

QUESTION SIX

- (a) Distinguish between the following terms:
- (i) Internet and intranet. (4 marks)
- (ii) Internet browser and protocol. (4 marks)
- (b) List two advantages of teleworking to an employee. (2 marks)
- (c) In the context of computer files, explain the relationship between hit rate, method of file organisation and type of storage media. (6 marks)
- (d) Describe the purpose of the following computer network devices:
- (i) Front end processor. (2 marks)
- (ii) Multiplexer. (2 marks)
- (Total: 20 marks)**

QUESTION SEVEN

- (a) Outline four factors to consider in the acquisition of an operating system. (4 marks)
- (b) Describe two utility softwares. (4 marks)
- (c) Describe three benefits which would accrue to a company as a result of having a computerised stock control system. (6 marks)
- (d) Distinguish between data workers and knowledge workers. (6 marks)

(Total: 20 marks)

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