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) Spreedsheets. (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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