2920/302
MANAGEMENT INFORMATION SYSTEMS
November 2017
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

MODULE III

MANAGEMENT INFORMATION SYSTEMS

3 hours

INSTRUCTIONS TO CANDIDATES

*This paper consists of **EIGHT** questions.*
*Answer any **FIVE** of the **EIGHT** questions in the answer booklet provided.*
All questions carry equal marks.
Candidates should answer the questions in English.

This paper consists of 4 printed pages.

**Candidates should check the question paper to ascertain that all the
pages are printed as indicated and that no questions are missing.**

Turn over

1. (a) Distinguish between *a master file* and *a transaction* file as used in computer systems.
   (4 marks)

   (b) Explain **three** advantages of using *database management systems* in an organization.
   (6 marks)

   (c) Describe each of the following as applied in project management:

   (i) Optimistic time;

   (ii) Most likely time;

   (iii) Pessimistic time. (6 marks)

   (d) PERT is used to review the progress of projects during project management. Explain **two** limitations of this technique. (4 marks)

2. (a) Define the term *early warning mechanism* as used in management information systems.
   (2 marks)

   (b) The questionnaire is a method used for data collection. Explain **three** disadvantages of using this method during data collection. (6 marks)

   (c) Dorothy intends to design user documentation for the program she developed. Explain **three** qualities of such a documentation that she should consider. (6 marks)

   (d) Most organizations require their new employees to be trained on the use of management information systems as part of employee orientation. Explain **three** reasons for this type of training. (6 marks)

3. (a) Define the term *milestone* as used in project management. (2 marks)

   (b) Explain a circumstance that would necessitate a systems analyst to recommend each of the following types of system maintenance:

   (i) corrective maintenance;

   (ii) perfective maintenance;

   (iii) adaptive maintenance. (6 marks)

   (c) Most organizations have their management information systems connected to a Local Area Network. Explain **three** benefits such organizations are likely to enjoy. (6 marks)

   (d) Capita Company intends to use the *Parallel changeover* method to implement its new information system.

   (i) Explain **two** advantages of this method to the company;

   (ii) Explain one disadvantage of using this method. (6 marks)

4. (a) Outline **four** ways in which a *Transaction Processing System* improves operation in an organization. (4 marks)

   (b) Managers rely on *decision support systems* to assist them in decision making. Describe **three** components of this system. (6 marks)

(c) Implementation of information systems in organizations may sometimes fail. Explain **three** measures that could be taken to prevent such failures. (6 marks)

(d) Management information systems could be classified according to the type of support provided. Describe this type of classification. (4 marks)

5. (a) Outline **four** features of an *executive information system*. (4 marks)

(b) Describe each of the following types of systems:

    (i) office automation system;

    (ii) GIS;

    (iii) virtual reality. (6 marks)

(c) Distinguish between *structured* and *unstructured* decisions. (4 marks)

(d) Debris Company has installed a biometric system to control access to its offices Explain **three** examples of biometric data that could be used in such a system. (6 marks)

6. (a) Information technology has been considered as an agent of organizational change. Explain **three** ways in which it has been applied to bring about this change. (6 marks)

(b) The following features describe a certain method used during the procurement process in an organization. Use them to answer the questions that follow:

- There is only one person or entity who can supply the goods or services being procured
- There is no reasonable alternative or substitute for the goods or service.
- There is an urgent need for the goods or services being procured

    (i) Identify the method of procurement described by these features. (1 mark)

    (ii) Outline **three** disadvantages of this method. (3 marks)

(c) Explain **two** reasons that would necessitate an organization to embrace *cloud computing* technology in their operations. (4 marks)

(d) Describe the *decision making process*, using the Herbert Simons' model. (6 marks)

7. (a) Explain **two** reasons for managing *information resources*. (4 marks)

(b) Computer users sometimes engage in unethical use of information in the course of duty. Explain **three** such unethical behavior. (6 marks)

(c) Distinguish between *a hacker* and *a cracker* as used in computer crime. (4 marks)

(d) With the aid of a diagram, outline the steps involved in *information system planning*. (6 marks)

8. (a) Define the term *guarantee* as applied in management information systems. (2 marks)

(b) Management information systems assist many organizations in marketing their products and services. Explain **three** ways in which an information system can be used to achieve this. (6 marks)

(c)   Computers are prone to attacks by viruses from various sources.

    (i)   outline **three** types of computer viruses;   (3 marks)

    (ii)   outline three ways of protecting computer systems against such viruses.   (3 marks)

(d)   The management of a certain company has acquired a new management information system for use and some staff are resisting this move. Other than training, explain **three** measures the company could adopt to minimize the resistance.   (6 marks)

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