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.
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.

1. (a) Outline **three** benefits of using network diagrams in project management. (3 marks)

   (b) Peter, an ICT manager at Masomo Institute is the custodian of personal data for all the employees. Explain **three** ethical obligations that he has with regard to this data. (6 marks)

   (c) A multinational organisation intends to implement a new Information System. Describe **three** levels of planning that would be necessary for successful implementation. (6 marks)

   (d) Uwezo institute is in the process of acquiring a library Management Information System.

       (i) Outline **two** activities that should have been undertaken at the preparation stage. (2 marks)

       (ii) Outline **three** steps that the institute followed at vendor choosing stage. (3 marks)

2. (a) Explain **two** circumstances that may lead to adaptive information system maintenance. (4 marks)

   (b) (i) State **four** information systems that could be used by top management in decision making in an organisation. (2 marks)

       (ii) Explain **two** approaches through which an information system could lead to fewer levels of management in a typical organisation. (4 marks)

   (c) Table 1 shows information for an ICT project. Use it to answer the question that follows.

Project activity	Predecessor activity	Duration in weeks
A	-	5
B	-	7
C	-	5
D	A	7
E	A	13
F	D,E	14
G	B	15
H	B	11
I	F,G	6

Table 1

Using the earliest start time and the latest finish times, determine the critical path. (6 marks)

   (d) Happyland Company Ltd operates its business globally. Describe **two** systems that could enable the company transact electronically. (4 marks)

3. (a) Outline **two** application areas of information society in a developing economy. (2 marks)

   (b) (i) Explain **two** circumstances that would lead an organization to use an Electronic Fund Transfer system. (4 marks)

   (ii) Ujuzi Institute intends to streamline its decision-making through the use of information system. Describe **three** types of decisions that could be streamlined. (6 marks)

   (c) Tegemeo Industries has adopted the use of robots in their production processes. Explain **two** advantages that the organisation would accrue from this move. (4 marks)

   (d) Differentiate between *intranet* and *extranet* as used in Management Information Systems. (4 marks)

4. (a) Outline **four** factors that could be considered to ascertain effectiveness of information systems maintenance. (4 marks)

   (b) Many organisations in Kenya install a Transaction Information System. Explain **two** reasons for this. (4 marks)

   (c) (i) State **two** categories of information system resources. (2 marks)

   (ii) Distinguish between *efficiency* and *effectiveness* as used in information systems resource utilisation. (4 marks)

   (d) Kazana Institute has been overseeing an ICT project that stalled. Explain **three** reasons that could have led to this. (6 marks)

5. (a) Outline **four** benefits realised by an organisation that outsource an information system. (4 marks)

   (b) A certain training company intends to acquire a system through *User Application Development* approach.

   (i) Outline **four** situations that make this approach applicable. (4 marks)

   (ii) Outline **two** limitations of this approach. (2 marks)

   (c) Differentiate between *confidentiality* and *integrity* security goals. (4 marks)

   (d) Fanaka College has an ICT project that is in progress. Describe **three** factors that are likely to affect resource allocation to this project. (6 marks)

6. (a) State **four** components of Management Information System. (2 marks)

   (b) Describe **three** types of information systems that could be used across all levels of management. (6 marks)

   (c) Jape Systems Company uses social media as its communication system. Explain **three** benefits the company realises from this. (6 marks)

(d)   Table 2 shows information about an ICT project. Use it to answer the question that follows.

Activities	Preceded by	Optimistic time	Most likely time	Pessimistic time	Expected time
A	-	3	4	5	4
B	-	2	3	16	5
C	A	2	13	18	12
D	B,C	1	2	3	2
E	A	3	14	16	13

Table 2

Determine the probability that the project will exceed the highest pessimistic time.

(6 marks)

7.   (a)   (i)   State **two** uses of project management software.   (2 marks)

(ii)   Outline **two** inputs that a user may enter into project management software for a given project.   (2 marks)

(b)   Explain each of the following environmental factors of an information system during planning:

(i)   Economic;   (2 marks)

(ii)   Technical;   (2 marks)

(iii)   Social.   (2 marks)

(c)   Distinguish between *ready-made* and *tailor-made* information systems acquisition methods.   (4 marks)

(d)   The management of a certain company developed an ICT security policy document. Explain **three** components of this document.   (6 marks)

8.   (a)   Explain one limitation of Gantt charts as a project management tool.   (2 marks)

(b)   (i)   Outline **two** approaches to information system classification.   (2 marks)

(ii)   Explain **three** roles played by the ICT department in Management Information System of an organisation.   (6 marks)

(c)   Differentiate between *perfective* and *preventative* information system maintenances.   (4 marks)

(d)   Futuregen Company Ltd acknowledges that personnel are core to a secure information system. Explain **three** mechanisms that the company's personnel department may use to enhance this.   (6 marks)

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