

2920/302

MANAGEMENT INFORMATION SYSTEMS

July 2019

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

MODULE III

MANAGEMENT INFORMATION SYSTEMS

3 hours

**INSTRUCTIONS TO THE CANDIDATE**

*This paper consists of EIGHT questions.*

*Answer any FIVE questions in the answer booklet provided.*

*Candidates should answer the questions in English.*

**This paper consists of 4 printed pages.**

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

1. (a) Outline **four** components of an *information resource*. (4 marks)
- (b) Rubbia bank has installed a *transaction processing system* for its operations. Explain **three** benefits of this system to the bank. (6 marks)
- (c) Rancho Company require an accounting information system and have opted to use their ICT staff developed it. Explain **three** benefits of this move to the company. (6 marks)
- (d) Distinguish between *copyright* and *Intellectual property* as applied in computer ethics. (4 marks)
2. (a) Outline **two** benefits of distributed systems. (2 marks)
- (b) Freshmans Ltd intends to implement new government legislation to their existing information system.
- (i) Describe a suitable type of system maintenance that would be performed on the system to incorporate this legislation. (2 marks)
- (ii) Explain **two** other types of system maintenance. (4 marks)
- (c) A certain company has established that its information is being electronically eavesdropped through their telephone lines. Explain **three** measures that the company could put in place to minimize this crime. (6 marks)
- (d) Cantata motor assembly plant intends to use *product differentiation strategy* to gain an advantage over its competitors. Explain **three** ways in which information systems could assist the firm use this strategy. (6 marks)
3. (a) Explain how management information systems facilitate the execution of each of the following organizational tasks:
- (i) coordination;
- (ii) planning;
- (iii) control. (6 marks)
- (b) Explain **three** ways in which *decision support systems* are applied in an organization. (6 marks)
- (c) The management of Jolene Company has incorporated a social interaction platform in its Management Information System. Explain **two** reasons for this move. (4 marks)
- (d) Jabali Company intends to to secure its Management Information System. Explain **two** physical measures that the company could put in place. (4 marks)
4. (a) Explain the term *cyber warfare* as used in computer ethics. (2 marks)
- (b) Describe each of the following types of information systems:
- (i) group decision support system;
- (ii) executive information system;
- (ii) enterprise resource planning system. (6 marks)

- (c) Outline **four** attributes of information as a resource in an organization. (4 marks)
- (d) Table 1 shows the sequence of activities and their respective duration in weeks for a certain project. Use it to answer the questions that follow.

Activity	Time (in weeks)	Preceded by
A	5	-
B	2	-
C	3	A
D	8	B,C
E	5	C,D
F	3	E,D
G	4	F
H	2	G

Table 1

- (i) Construct a network diagram to represent the information in Table 1. (3 marks)
- (ii) Identify the critical path from the network diagram. (3 marks)
- (iii) Assuming task D was delayed for 2 weeks, determine the possible finish time for the project. (2 marks)
5. (a) Describe each of the following approaches to organizational development:
- (i) socio-technical;
- (ii) behavioral. (4 marks)
- (b) Distinguish between *real-time* and *batch* modes of data processing. (4 marks)
- (c) Most organizations align their information system functions to their business strategic plan. Explain **three** benefits of this alignment. (6 marks)
- (d) Managers are often faced with tasks of decision making for their organizations. Outline the sequence of this decision making process. (6 marks)
6. (a) Explain **three** ways in which cultural barriers could pose challenges to developing global information systems. (6 marks)
- (b) Distinguish between *information system literacy* and *computer literacy*. (4 marks)
- (c) Teamwork is a strategy being embraced by managers to improve their organizations performance. State **four** communication technology tools that would be used to facilitate this strategy. (4 marks)
- (d) Most companies have embraced *cloud computing technology* in their operations. Explain **three** possible risks that could arise from the use of this technology. (6 marks)
7. (a) Outline **four** factors that could influence the choice of an information system acquisition method. (4 marks)

- (b) Explain the following types of decisions, stating the level of management where each could be applied:
- unstructured;
  - structured;
  - semi structure. (6 marks)
- (e) Digital library materials have become popular among producers and publishers globally. Outline **four** reasons for the popularity of these materials. (4 marks)
- (d) Arbiter Hospital has installed an expert system to assist in its operations. Explain **three** ways in which the system could be used by the hospital. (6 marks)
8. (a) (i) Outline **four** components of an information system plan. (4 marks)
- (ii) Explain **one** reason why an organization may choose not to connect its Management Information System to the Internet. (2 marks)
- (b) Distinguish between *value chain* and *value system* as applied in Management Information Systems. (4 marks)
- (e) Kombi Company has noted that some of its employees are resistant the newly installed information system. Explain **three** possible causes for this resistance. (6 marks)
- (d) Consider the following issues at work places
- Use of assigned access privileges to make changes to an MIS for personal gain.
  - A company that installs copyrighted software.
  - Requesting for a fee to award a job to an unqualified applicant.
  - An employer who fails to pay employees their dues. L
- Classify each of them as either *moral* or *legal* issues. (4 marks)

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