

2920/302
MANAGEMENT INFORMATION SYSTEMS
November 2021
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 questions in the answer booklet provided.
Candidates should answer all 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 **two** challenges of emerging trends in Management Information Systems. (2 marks)
- (b) Masomo Institute installed a new information system for data processing. Explain **three** guidelines that could be applied to ensure responsible use of this system. (6 marks)
- (c) A County Government intends to establish information centres. Explain **three** services that are likely to be offered in the centres. (6 marks)
- (d) (i) Ujuzi Institute engaged John as their ICT project manager. Explain **two** roles that he could play. (4 marks)
- (ii) Outline **two** causes of failure to complete an ICT project as scheduled. (2 marks)
- 2.
- (a) Explain **two** circumstances that leads to an effective change programme in an organisation through the use of information systems. (4 marks)
- (b) (i) Explain social-technical view as used in information systems. (2 marks)
- (ii) Explain **two** factors to consider when using information systems for decision making. (4 marks)
- (c) Table 1 shows details of an ICT project. Use it to answer the question that follows.

Project activity	Predecessor activity	Duration in weeks
A	-	7
B	-	10
C	A,B	9
D	A,B	8
E	D	11
F	C,E	13

Table 1

- (i) Using the earliest start times and the latest finish time, draw a network diagram for the project. (5 marks)
- (ii) Determine the project duration. (1 mark)
- (d) Viuall Company Ltd conducts its business globally. Describe **two** types of information systems the company could use. (4 marks)
- 3.
- (a) Outline **two** differences between Critical Path Method (CPM) and Project Evaluation and Review Technique (PERT) as used in project management. (4 marks)
- (b) (i) Describe adaptive system maintenance as used in information systems. (2 marks)
- (ii) A Technical Institute is undertaking an ICT project. Explain **two** attributes the project should exhibit. (4 marks)
- (c) Tegco Industries prefers using web-based IS project management. Explain **three** reasons for this preference. (6 marks)
- (d) Differentiate between *functional* and *management* activity approaches to information systems classification. (4 marks)

4. (a) Outline **two** characteristics of an information system for each of the following dimensions:
- (i) time; (2 marks)
 - (ii) content; (2 marks)
 - (iii) form. (2 marks)
- (b) Explain **two** importance of Management Information System in an organization. (4 marks)
- (c) (i) State **two** criteria used to measure information system performance after a maintenance activity. (2 marks)
- (ii) Distinguish between *perfective* and *preventive* systems maintenance. (4 marks)
- (d) Bidii Institute uses an executive support system. Describe **two** features of this system. (4 marks)
5. (a) Outline **four** stages of project management. (4 marks)
- (b) Tunzi Institute outsourced its information systems functions:
- (i) Explain **two** merits of this approach. (4 marks)
 - (ii) Outline **three** limitations of this approach. (3 marks)
- (c) Differentiate between *physical* and *human* information systems resources. (4 marks)
- (d) (i) Explain the term spoofing as used in information systems ethics. (2 marks)
- (ii) The following are types of plans: *rules, vision, procedures, mission, policies, regulations and strategy*. Classify each of the plans according to the level of management. (3 marks)
6. (a) Outline **two** results of automating workflow procedures. (2 marks)
- (b) Explain **three** types of decisions that could be made at each level of management in a typical organisation. (6 marks)
- (c) Janet, an ICT manager, uses a technique in which the start and finish times of a project are known with certainty. Explain **three** time estimates for the other activities in the project. (6 marks)
- (d) (i) State **four** functions that could be carried out using an Enterprise Resource Planning (ERP) in a typical organisation. (2 marks)
- (ii) Differentiate between *expert* and *artificial* intelligent systems. (4 marks)
7. (a) (i) State **two** impacts of computer crimes to a business. (2 marks)
- (ii) Outline **two** criteria for information system acquisition. (2 marks)
- (b) Explain each of the following terms as used in information systems ethics:
- (i) passive attack; (2 marks)
 - (ii) integrity. (2 marks)

- (c) Pendo Company has adopted office automation systems. Explain **three** advantages of these systems. (6 marks)
- (d) The management of a company prepared ICT security policy document. Explain **three** control measures that could have been included in the document. (6 marks)
8. (a) State **two** information systems planning methodologies. (2 marks)
- (b) (i) Outline **two** approaches that could be used to implement virtual offices. (2 marks)
- (ii) A system analyst provided a high maintenance cost estimate. Explain **three** factors that influenced this cost. (6 marks)
- (c) Explain **two** mechanisms that could be used when dealing with personnel in an organisation with respect to information systems ethics. (4 marks)
- (d) Newten Company Ltd is planning for a new information system. Outline the steps the company could take for an effective information system plan. (6 marks)

THIS IS THE LAST PRINTED PAGE.