

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN  
INFORMATION SCIENCE**

**BSIS 454: MANAGEMENT INFORMATION SYSTEM**

**STREAMS: BSC (IS)**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 20/09/2021**

**2.30 P.M – 4.30 P.M**

---

**INSTRUCTIONS**

- **Answer question one and any other two questions**
- **Do not write on the question paper**

**QUESTION ONE (30 MARKS)**

- (a) Describe the relevance of the following to a Decision Support System (DSS).
- (i) Specialized packages [2 marks]
  - (ii) Query language [2 marks]
  - (iii) Database Management System [2 marks]
- (b) Explain with examples the FIVE major factors that influence the structure of an information system. [10 marks]
- (c) Describe five properties of an expert system. [10 marks]
- (d) Explain the distinction between Office Automation System and knowledge work system. [4 marks]

**QUESTION TWO (20 MARKS)**

Organizational information systems are categorized under:

- (i) Transaction Processing System (TPS)

- (ii) Management Information System (MIS)
- (iii) Decision Support System (DSS)
- (iv) Executive Information System (DSS)
- (v) Expert System (ES)

**Required :**

- (a) Suggest one application of each of the systems types listed above for each of the following areas of business.
  - (i) Sales and marketing [5 marks]
  - (ii) Finance [5 marks]
- (b) The general manager of a large organization has asked you to draw up a document identifying eight important characteristics against which managers can evaluate the success of an information system together with a brief explanation of each. Assess the contents of the document. [8 marks]
- (c) What is artificial intelligence? [2 marks]

**QUESTION THREE (20 MARKS)**

- (a) Using illustrations where applicable, discuss the significance of prototyping in systems development. [10 marks]
- (b) Discuss five tools and techniques used for designing a system. [10 marks]

**QUESTION FOUR (20 MARKS)**

- (a) As an information expert, why is the study of systems theory and control systems significant? [10 marks]
- (b) A system may be coupled to varying degrees for various reasons. Discuss. [10 marks]

**QUESTION FIVE (20 MARKS)**

- (a) The company you work for has decided to replace its inventory control system. The current system was implemented ten years ago but has restricted reporting facilities and

has a text base interface. As the project manager, you are now considering both “parallel running” and “ direct changeover”.

- (i) Briefly explain what is meant by the terms “parallel running” and “direct changeover”. [4 marks]
  - (ii) Identify two main risks of direct change over suggest how these risks might be reduced for inventory control system implementation. [6 marks]
- (b) Describe the basic elements of a control system. [10 marks]
-