

**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATION**  
**FOURTH YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF**  
**BACHELOR OF BUSINESS AND INFORMATION MANAGEMENT**  
**FOURTH YEAR 2023/2024**  
**SEPTEMBER-DECEMBER 2023**  
**BINM 456: DECISION SUPPORT SYSTEMS**

**STREAMS: Y4 S1**

**TIME: 2 HOURS**

**INSTRUCTIONS**

1. Answer Question One and any other three questions
2. Question One Carries 25 Marks and the rest 15 Marks each

**Question One (Compulsory) (25 Marks)**

- a) Define a Decision Support System and show how they enhance human judgment in decision making [7 marks]
- b) Decision Support Systems possess some salient characteristics, list and briefly explain each one of them [10marks]
- c) Describe how problem is analyzed [8 marks]

**Question Two (15 Marks)**

- a) Making Decisions should be a process, describe this process briefly [5 marks]
- b) Human information processing characteristics influence judgment and choice, explain this influence in any five of these characteristics [10 marks]

**Question Three (15 Marks)**

- a) Describe how you understand a transportation problem [5 marks]
- b) A Milk Processing Company has three plants located throughout a state with production capacity 50, 75 and 25 gallons. Each day the firm must furnish its four retail shops R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, & R<sub>4</sub> with at least 20, 20, 50, and 60 gallons respectively. The transportation costs (in Kshs.) are given below.

Plant	Retail Shop				Supply
	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>	R <sub>4</sub>	
P <sub>1</sub>	30	50	70	60	500
P <sub>2</sub>	20	50	80	20	750
P <sub>3</sub>	30	60	90	20	250
<b>Demand</b>	200	200	500	600	

The economic problem is to distribute the available product to different retail shops in such a way so that the total transportation cost is minimum using the most appropriate method [10 marks]

**Question Four (15 Marks)**

- a) Describe the Principle of Optimality [5marks]
- b) How are Decision trees and critical planning used in Decision making [10marks]

**Question Five] 15 Marks)**

Highlight any five Decision support system tools and clearly bringing out how they are applied in decision making [15marks]