JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

UNIVERSITY EXAMINATION FOR THE DEGREE IN BUSINESS INFORMATION SYSTEMS

2ND YEAR 2NDSEMESTER 2021/2022 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: ITB 2210

COURSE TITLE: DECISION SUPPORT SYSTEMS

GROUP: BIS

DATE: EXAM SESSION:

TIME: 2 HRS

INSTRUCTIONS
Answer question **one** and any other **two** questions

QUESTION ONE 30 MARKS

a) What is Decision Support Systems?   (4 marks)

b) Why do managers need computerized support in the process of decision making?

                                                                    (6 marks)

c) List factors affecting decision making.   (4 marks)

d) Explain the following management support systems.   (6 marks)

e) List and explain the three phase decision making process.   (6 marks)

f) What is a model? List any Four (4) benefits of using models.   (6 marks)

QUESTION TWO 20 MARKS

a) Using a well labeled diagram, show the modeling process of a systematic decision
    making.

    (9 marks)
b) List the components of quantitative models. (5 marks)
c) With an example, show the structure of quantitative model.   (6 marks)

QUESTION THREE 20 MARKS

a) Using the Product-Mix Linear Programming Model, what is the decision in the following
    case scenario?   (10 marks)

    ■ Decision: How many computers to build next month?
    ■ Two types of computers
    ■ Labor limit
    ■ Materials limit
    ■ Marketing lower limits

Constraint	CC7	CC8	Rel	Limit
Labor (days)	300	500	<=	200,000 / mo
Materials Ksh	100,000	150,000	<=	8,000,000/mo
Units	1		>=	100
Units	1		>=	200
Profit Ksh		80,000		120,000 Max

Objective: Maximize Total Profit / Month

b) Differentiate between the Normative and Descriptive models and give two examples for each.

(6 marks)

c) Give reasons why managers settle for good enough decisions and not the best decisions

(4 marks)

QUESTION FOUR 20 MARKS

a) Briefly explain why making decisions is difficult for organization managers. [5 marks]
b) List down and clearly explain any five ethical issues arising from the development and use of Decision support systems. [5 marks]
c) Discuss the role of Artificial Intelligence in the development of current and future decision support systems. Give some examples. [5 marks]

d) Explain why managers sometimes make irrational decisions. [5 marks]

QUESTION FIVE 20 MARKS

a) Clearly explain the difference between OLAP and Data mining. [5 marks]
b) List down and describe any four Data mining tasks. (You can use examples) [5 marks]
c) The development of the Data mining research area has only until recently become popular. Give the reasons for this.   [5 marks]
d) Give any three advantages of using data visualization. [5 marks]