



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

SCT 404: DECISION SUPPORT SYSTEMS

DATE: Friday 20th April 2011

TIME: 8.00a.m – 10.00a.m

Instructions: *Answer question ONE and Any other TWO questions*

Question 1

- (a) Briefly discuss the following:
 - (i) Management support system (MSS) [2 marks]
 - (ii) Decision Support system (DSS) [2 marks]
 - (iii) Group support systems [2 marks]
- (b) List and define the phases of the decision-making process. [4 marks]
- (c) Define optimization and contrast it with suboptimization. [4 marks]
- (d) Compare the normative and descriptive approaches to decision-making. [4 marks]
- (e) What are the major functions (capabilities) of:
 - (i) DBMS? [2 marks]
 - (ii) Model-management system? [2 marks]
 - (iii) User interface system? [2 marks]
- (f) List and explain the major types of models used in DSS. [6 marks]

Question 2

- (a) The daily minimum requirement of an animal is **60 g** of protein, **48 g** of fat, and **120 g** carbohydrates. The contents of scraps **A** and **B** per kg are as follows:

	Scrap A	Scrap B
Protein	10 g	5 g
Fat	16 g	2 g
Carbohydrates	6 g	24 g

The cost of scraps **A** and **B** are £ 9 /kg and £ 13 /kg respectively.

How do we give a diet to the animal which will deliver adequate nutrition at the lowest cost?

[12 marks]

- (b) List and briefly discuss the three major components of linear programming. [6 marks]
- (c) What is the role of heuristics in modeling? [2 marks]

Question 3

- (a) Describe the role of the internet in MSS data management and business intelligent.[6 marks]
- (b) Briefly explain the following as used in DSS:
- (i) A decision table. [3 marks]
- (ii) A decision tree. [3 marks]
- (c) Discuss the major characteristics of DSS. [8 marks]

Question 4

- (a) Models are classified as strategic, tactical or operational. What is the purpose of such a classification? Give an example in each. [10 marks]
- (b) You are about to buy a car, following Simon's four –phase model (Search for this model), describe your activities at each step. [4 marks]
- (c) List and describe the major classes of DSS users. [6 marks]

Question 5

Identify an organization or a company you are familiar with and describe how the company currently uses computers and information systems, including web technologies and the web itself in decision-making. List all management support technologies (tools) available. [20 marks]