



UNIVERSITY EXAMINATIONS

ACADEMIC YEAR: 2022/2023

SEMESTER: SEP-DEC 2019

CODE: 4110
SYSTEM

UNIT: DECISION SUPPORT

DATE: APRIL 2023

TIME: 2 HOURS

INSTRUCTIONS: Answer question one and any other two

Do not write anything on the exam question paper.

QUESTION ONE (30 Marks)

- a) Describe the following terms and phrases as used in DSS. [5 Marks]
- a. Data warehouse
 - b. Data mart
 - c. Decision Support System
 - d. Operational data store
 - e. Meta data
- b) Explain **five** characteristics of data warehouse. [5 Marks]
- c) Illustrate with explanation about the Decision Support System Development Process: [7 Marks]
- d) When we say data warehouse is subject-oriented, describe this orientation aspect. [8 Marks]
- e) Sketch and explain the five important phases of decision-making process. [5 Marks]

QUESTION TWO (20 Marks)

- a) To assess the performance of a DSS, an evaluation metric of system is used. Describe the **two** main categories of the metric system. [4 Marks]
- b) As a designer, a DSS system has three main elements, Sketch and illustrate the development process. [8 Marks]
- c) Draw a hypothetical structure of a database management system for PIU. Explain how top management may arrive at the decisions they make most of the time. [8 Marks]

QUESTION THREE (20 Marks)

- a) Decision-making can be categorized according to its nature and according to its scope. Describe the classifications in the **two** mentioned groups. [12 Marks]
- b) A database organizes data into a logical hierarchy based on granularity of the data. What are the elements contained in the hierarchy formed? [4 Marks]
- c) What is data mining in the context of management support system? [2 Marks]
- d) There are several forces that act upon a decision maker. Give two of them and how they influence a decision maker. [2 Marks]

QUESTION FOUR (20 Marks)

- a) A DSS is implemented to replace managers and decision makers. Demystify this statement. [6 Marks]
- b) The advantages of DSS systems like CRM, ERP, and many others in the same category. Mention at least 5 disadvantages you consider critical. [5 Marks]
- c) Give an illustration of a hierarchy of data, for example, patient record for the in-patient's database. [6 Marks]
- d) In Simon's model of problem-solving, what is considered rational decision making? [3 Marks]

QUESTION FIVE (20 Marks)

- a) Construction of an effective DSS requires that the decision-making process follow a logical flow of a problem solving-solving process. What is the decision-making process and some of the factors influencing a rational choice of a DSS system? [8 Marks]
- b) Define the term heuristics and its advantages in problem solving. [6 Marks]
- c) Describe Effectiveness of and Efficiency from DSS. [4 Marks]
- d) There are many heuristic biases that can prevent you from finding a solution. Provide just two examples. [2 Marks]

The following are the possible consequences if found guilty of an Examination Offence:

- a) Remember examination cheating is a **CRIME** and you can be handed over to the **POLICE**.
- b) Immediately call and report to your Parent/Guardian about the incidence.
- c) Expulsion from the University.
- d) Academic Leave.