



STRATHMORE BUSINESS SCHOOL

MASTER OF BUSINESS ADMINISTRATION IN HEALTHCARE MANAGEMENT

END OF SEMESTER EXAMINATION

HCM 8201: DECISION ANALYSIS FOR HEALTHCARE MANAGERS

Date: Tuesday, 26th March 2024

Time: 3 Hours

Instructions

1. This examination consists of **FOUR** questions.
2. Answer **QUESTION ONE** and **ANY OTHER TWO** questions.

SECTION A (COMPULSORY)

Question 1 (20 Marks)

For the following decision problem, where you need to select an action (from a1-a4) for which you have been presented with different scenarios (s1-s4), which act(s) should be chosen according to the following decision rules:

- The maximin rule
- The maximax
- The minimax regret
- The optimism-pessimism rule (for $\alpha > 0.25$)

Show your workings and explain your logic in getting to your answer.

| | s1 | s2 | s3 | s4 |
|----|----|----|----|----|
| a1 | 20 | 20 | 0 | 10 |
| a2 | 10 | 10 | 10 | 10 |
| a3 | 0 | 40 | 0 | 0 |
| a4 | 10 | 30 | 0 | 0 |

SECTION B (select and answer any two questions from this section)

Question 2 (20 Marks)

Answer the following:

- a. With appropriate examples, differentiate between the classical, administrative and political approaches to decision-making **(12 marks)**
- b. With an appropriate example explain how you would apply sequential elimination to arrive at the best possible option **(8 marks)**

Question 3 (20 Marks)

Write short notes on :

- a. The prisoners dilemma
- b. Cooperative versus non-cooperative games
- c. Zero sum and non-zero sum games
- d. Violations of the Expected Utility Theory in decision making

Question 4 (20 Marks)

Differentiate between Logic, influence, flow and systems models