UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2022/2023

COURSE NAME	:	DECISION SUPPORT SYSTEM
COURSE CODE	:	BIT 30303
PROGRAMME CODE	:	BIT
EXAMINATION DATE	:	JULY/AUGUST 2023
DURATION	:	3 HOURS
INSTRUCTION	:	1. ANSWER ALL QUESTIONS.
		2. THIS FINAL EXAMINATION IS CONDUCTED VIA **CLOSED BOOK.**
		3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK.

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

TERBUKA

Q1 (a) Explain the **FIVE (5)** steps involved in decision problem structure.

(10 marks)

(b) Ahmad is thinking about buying a badminton set. The three factors important to him are price, ease of use, and the ability to store the exercise equipment in a closet when he is done using it. Given the following data in **Table Q1(b)(i)** and **Table Q1(b)(ii)**, help Ahmad determine the better badminton set for him.

Table Q1(b)(i)

FACTOR WEIGHTS	
FACTOR	IMPORTANCE WEIGHT
Price	0.85
Ease of use	0.75
Storage	0.65

Table Q1(b)(ii)

FACTOR EVALUATIONS		
FACTOR	PROFESSIONAL BADMINTON PLAYER	AMATEUR BADMINTON PLAYER
Price	0.5	0.8
Ease of use	0.95	0.6
Storage	0.9	0.7

(10 marks)

Q2 (a) Differentiate between Graphical User Interface (GUI) and User interface management system (UIMS).

(4 marks)

(b) Explain the **TWO (2)** factors that influence the success of user interface design.

(4 marks)

(c) Explain the **THREE (3)** types of user interfaces and draw an example of each type of these interfaces.

(12 marks)

Q3 (a) Define group decision support system (GDSS).

(2 marks)

(b) Explain how collaborative computing supports technologies using Time/Place Communication framework.

(12 marks)

Q4 (a) Discuss the importance of decision tree for decision analysis.

(4 marks)

(b) Based on **Figure Q4**, answer **Q4(b) – Q4(d)**.

CASE STUDY:

Droids Berhad is currently completely done with the drone farming project for farmers at Tangkak Johor. To launch the drone project, the company must decide whether to launch during intermonsoonal period (March to May) or second intermonsoonal period (October to November).

RM400,000 is required to launch the product. There are 70% successful chances and 30% chance of it if it fails. If the launch product is successful, the revenues level and the probability of each occurring are divided as follows:

	Probability (%)	Revenues
Low	30	RM30,000
Medium	50	RM40,000
High	20	RM50,000

If the drone product fail, there is 60% probability and the product still can be sold for RM50,000. However, 40% probability if the drone product is worth nothing.

Figure Q4

Draw a structure of decision tree based on given case study.

(10 marks)

(c) Calculate the Expected Value (EV) for decision tree points.

(6 marks)

(d) Which decision is the best? Justify your answer.

(4 marks)

-END OF QUESTIONS –