



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2013/2014**

COURSE NAME : DECISION SUPPORT SYSTEM
COURSE CODE : BIT 30303
PROGRAMME : 3 BIT
DATE : JUNE 2014
DURATION : 2 HOURS AND 30 MINUTES
INSTRUCTION : ANSWER **ALL** QUESTIONS.

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1 Decision Support System (DSS) is defined as “A conceptual framework for a process of supporting decision making in organizational level, usually by modeling problems and employing for solution analysis.”

(a) Describe **THREE (3)** organizational levels in decision making. Provide **TWO (2)** examples of each. (10 marks)

(b) Define briefly **THREE (3)** common types of model in DSS analysis. (6 marks)

(c) Describe the **THREE (3)** forces that affect a particular individual’s decision styles. (4 marks)

Q2 (a) List **THREE (3)** fundamental components of a problem structure. (3 marks)

(b) Describe **TWO (2)** methods of modeling a decision structure with an aid of diagram. (5 marks)

(c) Model the decision structure for scenario Figure **Q2(c)** using the answer in **Q2(b)**.

Sunny Bakery is a small grocery store. It provides customers’ need and concerned with the financial viability of the store. Bread is one of their major daily products. The store decide to supply as much bread to its customers each day.

FIGURE Q2(c)

(12 marks)

Q3 (a) Design the decision support system using the DSS framework for Figure **Q3(a)**.

Majujaya Entreprise is leading clothing with over 100 departmental stores in Malaysia. The departmental stores have to reconsider the best way to secure and maintain a competitive advantage. With increasing competition, they are planning on using a sophisticated decision support system. The existing system in the company handles large amounts of data, however, inadequate data access and analysis capabilities prevented managers from exploiting the wealth of information buried in their business transaction.

FIGURE Q3(a)

(10 marks)

(b) Explain **THREE (3)** factors that may cause the failure of the DSS project. (6 marks)

(c) Describe **FOUR (4)** factors that are related to the quality of the user interface design for a DSS project. (4 marks)

Q4 Answer **Q4(a)** and **Q4(b)** based on Figure **Q4**.

The XTMach Travel agent is producing group leisure traveling. The company needed an efficient model to help it optimize its group selection for a journey and accommodation. The method was time consuming, because up to 20 personnel had to attend three to five meetings quarterly in a year in order to make the decisions. Additionally, each person had knowledge of different areas of improvement which make it difficult to come to decisions.

FIGURE Q4

(a) Suggest possible approaches to solve the given situation. (10 marks)

(b) Design the decision making process for the situation using Simon's model. (10 marks)

Q5 (a) Define the term Group Decision Support System (GDSS). (4 marks)

(b) Describe **THREE (3)** benefits of working in groups. (3 marks)

(c) Provide GDSS products that give indirect support to decision making. (3 marks)

- (d) Suggest **TWO (2)** advantages of introducing a new DSS for Figure Q5(d).

In ABC Company, each model builds prototypes that cost about RM3.8 Million each and tests how they react to a frontal crash. Designing a new car is a complex and lengthy process. ABC hardly makes improvements and tests their products. Even as late as the 2005, ABC crashed as many as 70 prototype versions of each new model. The information regarding a new design collected from these crashes and other tests has to be shared among approximately 11,000 designers and engineers in hundreds of divisions and departments located all over the world. In addition, ABC must communicate and collaborate with the design engineers of the more than 1,000 key suppliers. All this communication and collaboration slowed the decision process and increased costs. It took over four years to get new model to market and the new car often looked stale on arrival because public tastes had changed during the course of development.

FIGURE Q5(d)

(10 marks)

- **END OF QUESTION** -