



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
(TAKE - HOME)  
SEMESTER I  
SESSION 2020/2021**

COURSE NAME : SYSTEM ANALYSIS AND DESIGN  
COURSE CODE : DAT 10803 / DAT 20203  
PROGRAMME CODE : DAT  
EXAMINATION DATE : JANUARY / FEBRUARY 2021  
DURATION : 3 HOURS  
INSTRUCTION : SECTION A: ANSWER ALL QUESTIONS  
SECTION B: CHOOSE ONE (1)  
QUESTION ONLY

THESE QUESTIONS PAPER CONSISTS OF FIVE (5) PAGES

**TERBUKA**

**SECTION A**

**Q1** (a) List **THREE (3)** advantages of using system analysis and design techniques in approaching computerized information systems for business.

(6 marks)

(b) Explain each phase of Software Development Life Cycle (SDLC).

(8 marks)

(c) Describe **THREE (3)** disadvantage of the Waterfall model.

(6 marks)

**Q2** (a) Describe the Economic Feasibility.

(4 marks)

(b) Assume you are put in charge of launching a new website for a local nonprofit organization. Consider both one-time and recurring costs.

(i) Explain **THREE (3)** considerable of one-time costs would you need to account.

(3 marks)

(ii) List **THREE (3)** of expected recurring costs for the project.

(3 marks)

(c) Angus Mc Indoe wants to modernize his popular restaurant by adapting it more closely to the preferences of his repeat customers. Keeping track of his customers' likes and dislikes. Information such as where they like to sit, what they like to eat, when they normally arrive at the restaurant are all items of interest to him, because he believes that in this way he can better serve his customers. Angus has asked you to develop a system for him that will help make his customers happy while increasing his business. You have heard what Angus had to say about his customers. There are certainly more preferences that he can keep track of.

Develop a scope statement for Angus Mc Indoe.

(10 marks)

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- Q3**
- (a) Define the meaning of 'Usability' for a good software design. (1 mark)
  - (b) Explain **THREE (3)** elements of good user interface design. (6 marks)
  - (c) Define **THREE (3)** main input design objectives (3 marks)
  - (d) Explain the role that the Data Flow Diagram (DFD) plays in systems modelling with the emphasis on designing the User Interface. (2 marks)
  - (e) Sketch **ONE (1)** example of process in a web e-Commerce DFD for level 0 along with the source, destination as well as input and output data flow (4 marks)
  - (f) Sketch a user interface for the example that has been stated in answer **Q3(e)** (4 marks)

- Q4**
- (a) There are **SEVEN (7)** major activities in System Analysis and Development. List **THREE (3)** activities in System Implementations and Operations. (3 marks)
  - (b) Explain **TWO (2)** purposes of System Implementation and Operation. (4 marks)
  - (c) List **TWO (2)** activities include in each System Implementation and Operation from **Table 1**. (6 marks)

**Table 1: System Implementation and Operation**

Action	Deliverable
Coding	
Testing	
Installation	

- (d) Define the process of maintaining information systems. (2 marks)
- (e) State **THREE (3)** types of testing includes in Software Application Testing. (3 marks)
- (f) Provide **TWO (2)** main testing process using acceptance testing by users' technique. (2 marks)

## SECTION B

- Q5** Carson, who is a member of the human resources department at the Elrod Manufacturing Company plant is constantly being asked by employees how much is taken out of their paychecks for insurance, taxes, medical, mandatory retirement, and voluntary retirement. “It takes up to a few hours every day,” says Carson.

He would like a Web system that would allow employees to use a secure logon to view the information. Carson wants the system to interface with health and dental insurance companies to obtain the amount remaining in the employee’s account for the year. He would also like to obtain retirement amounts saved along with investment results. Carson has a high regard for privacy and wants the system to have employees register and give permission to obtain financial amounts from the dental insurance and retirement companies.

- (a) Identify the entity on a data flow diagram based on the paragraph above. (4 marks)
- (b) Draw a context-level data flow diagram for the Employee Benefit system. (16 marks)

- Q6** Amelia is a chief executive officer of a bakery shop. She wants her customers know about what service that she deliver. She also wants to sell her goods directly through website so that her business will be smooth and steadily. She decided to hire a System Analysis to design a public website. Her employee have made up a flow chart for her desire website. **FIGURE Q6(a)** shows a flow chart of Sandy bakery website.

- (a) Based on the **FIGURE Q6(a)**, list all of the important things to be filled up in the website. (5 marks)
- (b) Name **ONE (1)** of the suitable databases used for the website. Next, design an interface for the website referred to the answers from **FIGURE Q6(a)**. (15 marks)

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-END OF QUESTIONS-

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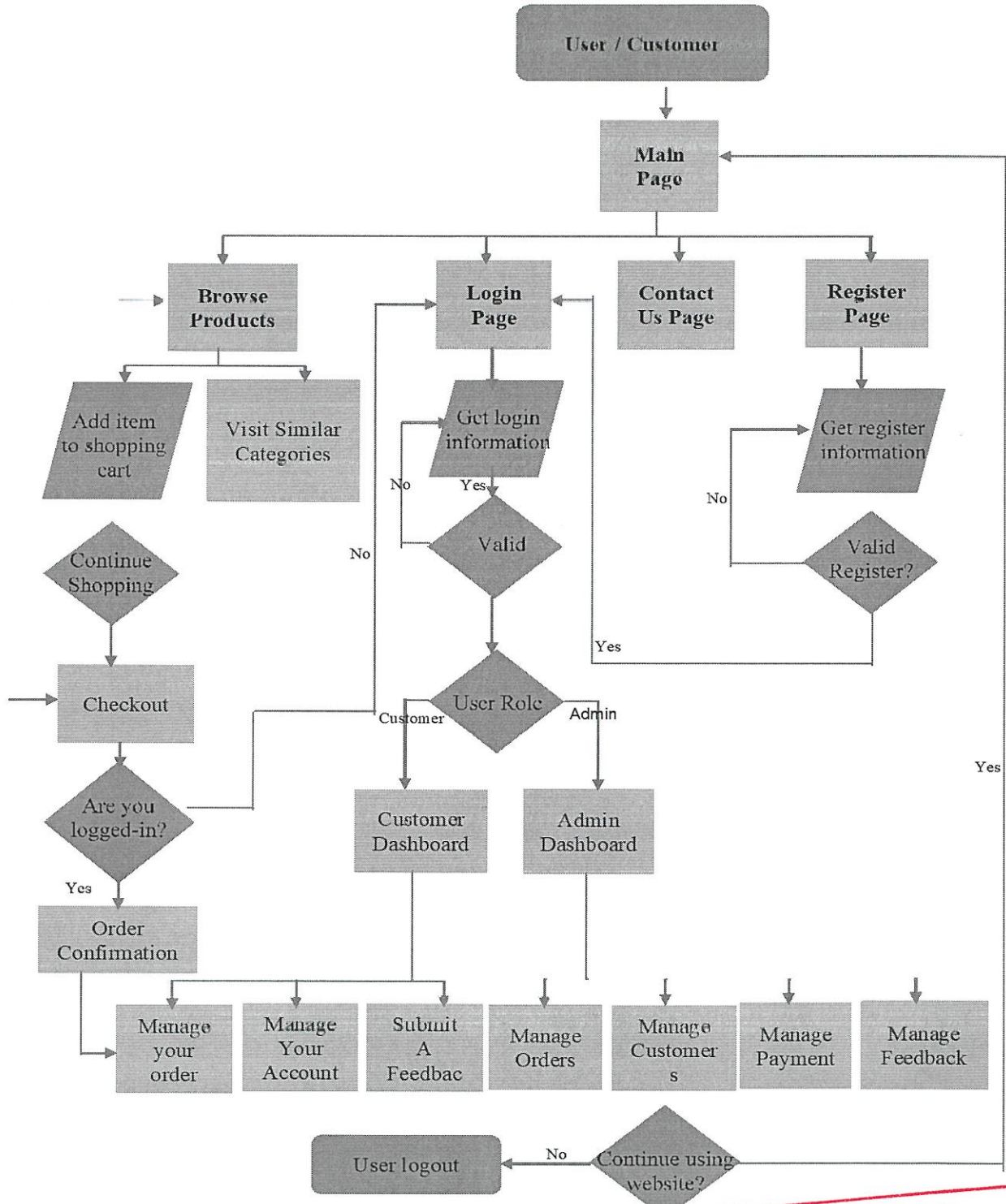


FIGURE Q6(a)

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