



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER I  
SESSION 2017/2018**

COURSE NAME : REQUIREMENT MODELING AND ANALYSIS  
COURSE CODE : BIE 30603  
PROGRAMME CODE : BIP  
EXAMINATION DATE : DECEMBER 2017 / JANUARY 2018  
DURATION : 3 HOURS  
INSTRUCTION : ANSWER ALL QUESTIONS

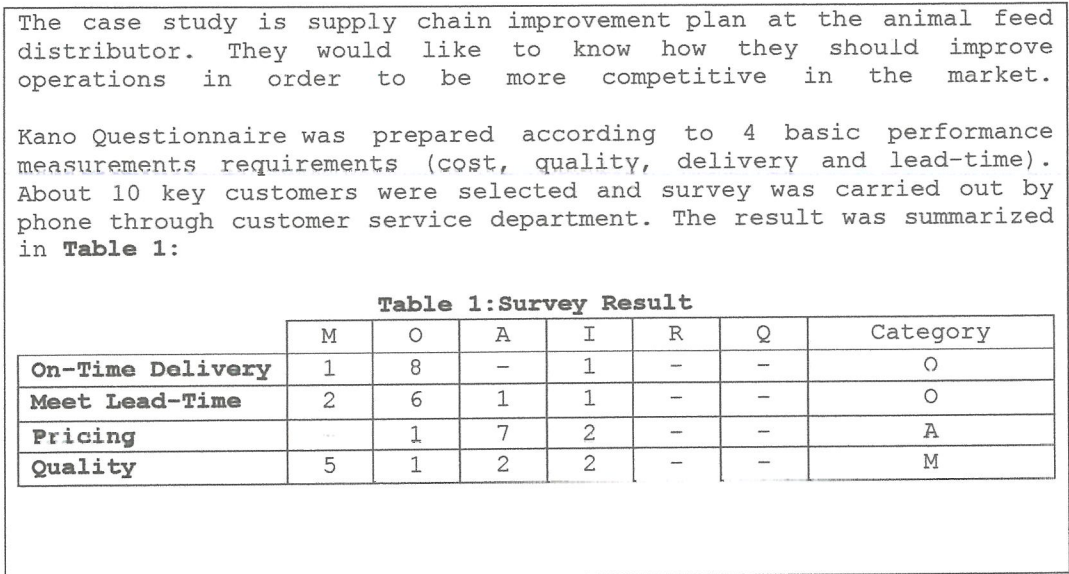
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THIS QUESTION PAPER CONSISTS OF **SIX (6)** PAGES

Instruction: Answer ALL questions.

- Q1** (a) Explain **TWO (2)** possibilities of requirements error. (2 marks)
- (b) Determine which validation criteria are not fulfilled by each of the following requirement statements. Justify your answer.
- (i) The system will allow authentication of authorized users. (2 marks)
- (ii) The system should be able to charge Goods and Services Tax (GST) valued 3% on all taxable supplies of goods and services in Malaysia except those specifically exempted. (2 marks)
- (iii) The system must be free of defects. (2 marks)
- (iv) Students will be able to enroll to undergraduate and post graduate courses. (2 marks)
- Q2** Name the type of ambiguity for the following software requirements. Justify your answer.
- (a) The report generated with the date. (4 marks)
- (b) The system shall allow user to apply maximum of 30 days of annual leave and maternity leave. (4 marks)
- (c) A record of transaction is in history log. (4 marks)
- (d) All full-time staffs shall be able to receive a bonus. (4 marks)
- (e) Every customer feels he is right. (4 marks)

**Q3 Answer Q3(a)-Q3(e) based on case study in Figure Q3.**



**Figure Q3**

- (a) Outline a Kano survey for each requirement in **Table 1**. (8 marks)
- (b) Show how most of the customers fall under “O” Category for “On-Time Delivery” requirement. You may refer information in **Table 2**.

**Table 2: Kano Classification**

Customer Requirement		Negative Question					M = Must Be O = One-Dimensional A = Attractive I = Indifferent R = Reverse Q = Questionable
		1.like	2.must be	3.neutral	4.live with	5.dislike	
Positive Question	1.like	Q	A	A	A	O	
	2.must be	R	I	I	I	M	
	3.neutral	R	I	I	I	M	
	4.live with	R	I	I	I	M	
	5.dislike	R	R	R	R	Q	

(2 marks)



- (c) Categorized each requirement based on Kano Classification. (4 marks)
- (d) List the priority. (4 marks)
- (e) Conclude the finding from the survey. (2 marks)

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**Q4 Answer Q4(a)-Q4(e) based on case study in Figure Q4.**

1 RU Financial Services is currently beginning an e-commerce project to dev  
 2 software for a web-based online stock and securities trading system. The  
 3 system has been tentatively named the **RU e-st** system.  
 4  
 5 The **RU e-st** system allows its users to trade securities online, using a  
 6 interface. The system can run under either Google Chrome or Inte  
 7 Explorer. A trading customer can log on to the Internet anywhere such  
 8 hotel room, airport and so on. The system should not be down for more tha  
 9 minutes at any other time. Users can perform all the basic operations  
 10 securities trading: open accounts, trade stocks and other securit  
 11 transfer assets among **RU e-st** accounts. Users can also obtain current  
 12 historical information about their accounts, such as the number of sh  
 13 held, the current price and the account total value.  
 14  
 15 Customers can execute many types of trade orders, market trading (buy  
 16 sell at current market prices), transfers from one mutual fund to ano  
 17 (within one account), and limit trading (buy and sell at a specific pri  
 18 The system must provide accurate market data that is no more than fiv  
 19 minutes old. A customer also must receive status on their transaction wi  
 20 five seconds of placing the order. The **RU e-st** system uses the existi  
 21 Market Trading System to perform the securities trades. **RU e-st** also al  
 22 users to transfer cash in an account to or from financial institutions  
 23 as banks or credit card vendors, using the existing Financial Network Sys  
 24 The usual restrictions apply:  
 25 • For online market sales, the securities to sell must be in  
 26 customer's account.  
 27 • For market purchases, cash for the purchase must be in the accoun  
 28 the settlement date.  
 29 • Transfers and purchases from an account are allowed only if, at  
 30 time the transaction occurs, they have enough cash to fund  
 31 transaction in the account.  
 32  
 33 Trading customers can obtain information about what is happening in  
 34 securities markets. A trading customer can obtain price quotes and  
 35 headlines by entering the trading symbol (for example, "IBM") fo  
 36 particular security. The **RU e-st** system obtains current and historical qu  
 37 from the existing Quote System service and news items from the existing  
 38 System. **RU e-st** also has a feature to broadcast news headlines periodic  
 39 on the trading customer's screen (without being asked). The user of **RU**  
 40 does not have to install any additional software to use the system.

Source: Rational Software [2]

**Figure Q4: RU e-st system description**

- (a) Draw a use case diagram to depict main functions of **RU e-st** system.  
 (10 marks)
- (b) List **FIVE (5)** functional requirements of **RU e-st** system. State the  
 line numbers.  
 (10 marks)

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- (c) LIST FIVE (5) quality requirements of RU e-st system. State the line numbers. (10 marks)
- (d) Suggest FIVE (5) classes that may exist in RU e-st system. (10 marks)
- (e) Suggest TWO (2) attributes for each class answered in Q4(d). (10 marks)

- END OF QUESTION -

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