CONFIDENTIAL QQM2063

UNIVERSITI UTARA MALAYSIA

FINAL EXAMINATION
FIRST SEMESTER SESSION 2008/2009

CODE/SUBJECT NAME : QQM2063 / FUNDAMENTAL OF BUSINESS MATHEMATICS
DATE : 7 NOVEMBER 2008 (FRIDAY)
TIME : 3.00 – 5.30 P.M. (2 1/2 HOURS)
LOCATION : DSB K.T/WD

INSTRUCTIONS:
1. This book script contains EIGHT (8) questions in NINE (9) printed pages excluding the cover page.
2. Answer ALL questions in the spaces provided.

MATRIC NO. : ____________ ( in words ) ____________ ( in numbers )

IDENTIFICATION NO. :

LECTURER :

GROUP : [ ] TABLE NO.: ____________

PLEASE DO NOT OPEN THIS QUESTION BOOK UNTIL YOU ARE TOLD TO DO SO.
QUESTION 1 (8 MARKS)

a. A promissory note with a face value of RM5000 is issued on March 3. It has a stated rate of interest of 6.5% for a period of 3 months.

i. What is the legal due date? (1 mark)

ii. How much interest will be payable at maturity? (2 marks)

iii. If the note is sold on April 28th at discount rate of 5.95%, what are the proceeds? (3 marks)

b. Gary obtained a single-payment loan of RM17,000 to pay for tree spray for his commercial orchard. He agreed to repay the loan in 270 days at an interest rate of 12.35% exact interest. What is the maturity value of his loan? (2 marks)
QUESTION 2 (10 MARKS)

a. An internet magazine contained an article that started the following: “The net income for 2006 was RM750,000, and the return on equity was 25%”. What was the amount of equity to the nearest ringgit? (2 marks)

b. On March 1, 2007, the press reported that Target’s earnings topped Stock Market for the quarter. Target reported this year that overall profit rose 15% to RM23 million. Sales rose 8.3% to RM10.5 billion. How much were Target’s profits last year? (2 marks)

c. Given: Gross Sales, RM110,000; sales returns and allowances, RM7,500; beginning inventory, RM8,300; net purchases, RM13,000, ending inventory, RM2,200; and net income, RM45,400. Calculate:
   i. net sales (2 marks)

   ii. cost of merchandise (goods) sold (2 marks)

   iii. profit margin on net sales (2 marks)
QUESTION 3 (10 MARKS)
A buyer orders 500 cotton sweaters at a cost of RM20 per sweater.

a. What is the cost for all of sweater when they are sold? (2 marks)

b. If the buyer wants to have a maintain markup of 50%, what is the total sales dollars that must be generated by the sale of all 500 sweaters? (2 marks)

c. The buyer sets the initial selling price for the sweaters at RM45. 200 sweaters are sold at that price. How many sales were generated by the sales of the initial 200 sweaters? (2 marks)

d. How many sales must be generated by the remaining 300 sweaters to achieve a maintained markup of 50%? (2 marks)

e. Sales of the sweaters are slowing and thus the buyer is going to mark them down. What does he need to sell each of the remaining 300 sweaters at realize a 50% maintained markup? (2 marks)
QUESTION 4 (10 MARKS)

a. Fatimah borrowed RM8,000 to travel to Sweden for vacation. Her loan was to be paid in 36 monthly installment of RM275. At the end of 9 months, Fatimah's son Ahmad convinced her that she should pay off the loan early.

i. What is the Fatimah's rebate amount? (3 marks)

ii. What is the Fatimah's payoff amount? (3 marks)

b. A set of bedroom furniture is priced at RM3,999. It can be purchased with a 10% down payment and 36 monthly payments. The retailers charge 15% simple interest on all installment purchases.

i. What is the finance charge? (2 marks)

ii. How much is the monthly payment? (2 marks)
QUESTION 5 (12 MARKS)

a. The Christopher Corporation began its October operations with 30 units in inventory. Each unit cost the company RM10. On October 7, the company purchased 120 more units at a cost of RM11 each. The company sold 80 units on October 12 at a price of RM23 each.
   i. Using the LIFO inventory method, determine the cost of the 80 units sold by the Christopher Corporation on October 12. (2 marks)

   ii. Determine the cost of the Christopher Corporation's October 12 ending merchandise inventory of 70 units. (3 marks)

b. In declining economy (costs continue to decline), which of the three methods of valuing an inventory will result in the:
   i. Highest cost of goods sold (1 mark)

   ii. Smallest ending inventory (1 mark)
c. Pat bought a truck for RM40,000 with an estimated life of 7 years. The residual value of the truck is RM7,000. Assume a straight line method of depreciation.
   i. What will be the book value of the truck at the end of 3 year? (3 marks)

   ii. If the truck was bought the first year on April 24, how much depreciation would be taken in the first year? (2 marks)

**QUESTION 6 (12 MARKS)**

a. A retailer has purchased a supply of pet toys directly from the manufacturer for RM2.30 each toy. They have purchased 10 cases and each case holds 50 toys. The invoice date is September 30 and the goods were received on October 2. The invoice is received on October 4 and it reads 2/10, 1/15, and n/30.

   i. What is the last date of the discount period? (1 mark)

   ii. If the invoice is paid on October 10th, what is the size of the payment? (3 marks)

   iii. If the invoice is paid on October 15th, what is the size of the payment? (2 marks)
b. Sharper Image Company asked for and received a discount from its suppliers. The discount was in the form of a RM760 rebate. If this company placed an order of RM8,300, what percent discount did they receive? (2 marks)

c. A manufacturer of skateboards offered a 5/3/1 chain discount to many customers. Bob's Sport ordered 15 skateboards for a total RM635 list price.
   i. What was the net price of the skateboards? (2 marks)
   
   ii. What was the trade discount amount? (2 marks)

**QUESTION 7 (8 MARKS)**

A local store has decided to offer selected products for sale using a series of increasing discounts. The store opens at 8 a.m. and will offer a discount of 5% off the reduced price every hour, starting at 8 and continuing until it closes at 5 p.m. The discount will be increased by 5% per hour. This will result in the first hour having a 5% discount, the second hour having a 10% discount, the third hour a 15%. This will continue for the remainder of the hours that the store is open.

a. Raja wants to buy a product that originally retails for $149.30. The last one is on the shelf and he decides to buy it at 3:35 p.m. What is the price of the item? (2 marks)
b. Raja’s friend bought the same item at 12.32 p.m. How much more did he pay? (3 marks)

c. An item with a RM69 original selling price was sold for RM55.20. Between what hours were it sold? (3 marks)

QUESTION 8 (10 MARKS)

a. Tina bought a new Honda City and insured it with only compulsory insurance. Driving up to her home in one evening, Tina hit a parked car and injured the couple inside. Tina car’s had damage of RM4,000, and then the car she struck had damage of RM5,500. After a lengthy court suit, the injured persons were awarded personal injury judgments of RM15,000 and RM7,600, respectively.
   i. What will the insurance company pay for this accident? (3 marks)

   ii. What is Tina’s responsibility? (3 marks)
b. 

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<thead>
<tr>
<th>Age</th>
<th>5-year term</th>
<th>Straight life</th>
<th>20-payment life</th>
<th>20-year endowment</th>
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Table 1: Life insurance rates for males (for females, subtract 3 years from the age)

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<th>Amount of paid-up insurance</th>
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Table 2: Nonforfeiture options based on RM1,000 face value

By referring to the given table, answer the followings:

i. If Mr. Guna, aged 39, buys a RM80,000 straight life policy, what is the amount of his annual premium? (2 marks)

ii. If Kim decides to cash in his RM55,000 20-payment life insurance policy after 15 years, what cash surrender value will he receive? (2 marks)

-END OF QUESTIONS-