



*NURTURING INNOVATORS*

**RIARA SCHOOL OF BUSINESS  
SEPTEMBER – DECEMBER 2023 TRIMESTER  
EXAMINATION FOR DIPLOMA IN BUSINESS ADMINISTRATION  
DAY PROGRAMME**

**RBM 012: INTRODUCTION TO BUSINESS MATHEMATICS**

**DECEMBER 2023**

**TIME: 2 HOURS**

**GENERAL INSTRUCTIONS:**

Students are NOT permitted to write on the examination paper during reading time.

This is a closed book examination. Text book/Reference books/notes are not permitted.

**SPECIAL INSTRUCTIONS:**

1. Write your REGISTRATION NO. Clearly on the answer booklet(s).
2. Answer Question One and ANY other TWO questions.
3. Questions in all sections should be answered in answer booklet(s).
4. Marks allocated to each question are shown at the end of the question.
5. PLEASE start the answer to EACH question on a NEW PAGE.
6. For the questions, write the number of the question on the answer booklet(s) in the order you answered them.
7. Write your answers in paragraph form unless stated otherwise.
8. Keep your phone(s) SWITCHED OFF at the front of the examination room.
9. Keep ALL bags and caps at the front of the examination room and do not refer to any unauthorized material before or during the course of the examination.
10. You are only allowed to leave the examination room 30minutes to the end of the Examination.

**SECTION A**

**QUESTION ONE: COMPULSORY (30 MARKS)**

A) Work out the following multiple choice questions.

**(8 Marks)**

i) Reduce  $\frac{36}{45}$  -----

- a)  $\frac{2}{3}$       b)  $\frac{3}{4}$       c)  $\frac{4}{5}$       d)  $\frac{7}{8}$

ii) Change  $\frac{3}{10}$  to 40ths -----

- a)  $\frac{8}{40}$       b)  $\frac{9}{40}$       c)  $\frac{12}{40}$       d)  $\frac{10}{40}$

iii) Write  $5\frac{4}{7}$  as an improper fraction -----

- a)  $\frac{27}{4}$       b)  $\frac{39}{7}$       c)  $\frac{16}{7}$       d)  $\frac{27}{5}$

iv) Change  $\frac{15}{6}$  to a mixed number -----

- a)  $1\frac{5}{6}$       b)  $2\frac{1}{3}$       c)  $2\frac{5}{6}$       d)  $2\frac{1}{2}$

v)  $4\frac{2}{3} \div 2\frac{1}{3} = \dots\dots\dots$

- a)  $10\frac{8}{9}$       b) 7      c)  $2\frac{1}{3}$       d) 2

vi). Round 0.5431 to the nearest hundredth.

- a) 0.543      b) 0.54      c) 0.55      d) 0.52

vii). Change 0.165 to a reduced fraction.

- a)  $\frac{3}{20}$       b)  $\frac{1}{8}$       c)  $\frac{33}{200}$       d)  $\frac{4}{25}$

viii). Change  $5\frac{2}{3}$  to a decimal .

- a) 5.6      b) 5.67      c) 5.65      d) 5.76

B) The person or business that a check is made out to is called the \_\_\_\_\_ **(2 Marks)**

- a) Maker
- b) Owner
- c) Payee
- d) Teller

C) In order to keep track of the transactions you make on your checking account, you should record them in \_\_\_\_\_ **(2 Marks)**

- a) An account register  
 b) A transaction recorder  
 c) A notebook  
 d) A record
- D) The amount of money that you currently have in your checking account is called the \_\_\_\_\_ **(2 Marks)**  
 a) Debit  
 b) Credit  
 c) Transaction  
 d) Balance
- E) The summary of your transactions obtained from the bank is called the \_\_\_\_\_ **(2 Marks)**  
 a) Bank balance  
 b) Deposits total  
 c) Transactions total  
 d) Bank statement
- F) In order to balance your check book, the amount of money in the account register should equal the \_\_\_\_\_ **(2 Marks)**  
 a) New balance  
 b) Adjusted balance  
 c) Total of the financial transactions  
 d) Previous balance
- G) If the cost of a calendar is \$5 and the selling price is \$12, the markup rate on the cost is \_\_\_\_\_ **(2 Marks)**  
 a) 41.7%  
 b) 58.3%  
 c) 40%  
 d) 140%
- H) A coffee and doughnut shop makes 600 doughnuts a day. They sell for \$0.50 each. About 12% are not sold each day and are discarded. The adjusted sale price is \_\_\_\_\_ **(2 Marks)**  
 a) \$0.60  
 b) \$0.62  
 c) \$0.57  
 d) \$0.54
- I) A carton containing puzzles has a list price of \$59. If a 30% trade discount is offered, find the net price. **(2 Marks)**  
 a) \$17.70  
 b) \$76.70  
 c) \$100.30

- d) \$41.30
- J) Find the net price of a chair that has a list price of \$375 if a trade discount series of 10/5/3 is offered. **(2 Marks)**
- a) \$311.01
- b) \$63.99
- c) \$67.50
- d) \$307.50
- K) Peter borrowed \$750 at 934 % for 2 years. The interest is \_\_\_\_\_ **(2 Marks)**
- a) \$146.25
- b) \$135.00
- c) \$142.75
- d) \$139.00
- L) A person borrowed \$5600 at 12% and paid \$2688 in interest. The time of the loan in years is \_\_\_\_\_ **(2 Marks)**
- a) 2 years
- b) 4.5 years
- c) 4 years
- d) 3.5 years

**SECTION B - ANSWER ANY 2 QUESTIONS (20 MARKS EACH)**

**QUESTION TWO**

- A) The balance in a checking account was \$2473.12 and the following transactions were made:

Date	Check number	Payee	Amount
5/1	986	Nail Salon	\$29.00
5/6	987	Groceries At Home	\$56.12
5/8		Deposit	\$53.00
5/15	988	Hair In Place	\$28.00
5/21	989	Book Club	\$38.95
5/22		Deposit	\$38.95

Show these transactions on an account register.

**(10 Marks)**

- B) For the transactions in A above, reconcile the bank statement shown and find the adjusted balance. **(10 Marks)**

<b>Bank statement</b>	
Previous balance	\$4473.12
Deposits total	\$53
Withdrawals total	\$124.07
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New balance	\$2402.05

<b>Financial transactions</b>		
<b>Date</b>	<b>Check number</b>	<b>Amount</b>
5/1	986	\$29.00
5/6	987	56.12
5/29	989	38.95
Total		\$124.07

### QUESTION THREE

- A) Every month a bank is expected to send a statement of transactions to its checking account customers to enable them balance their accounts. Outline the steps a customer may follow to reconcile a bank statement. **(6 Marks)**
- B) Yolanda Lin yearly salary is \$98,376. Find her gross pay if she is paid biweekly. **(3 Marks)**
- C) Find a worker's gross pay if the worker is paid a straight piecework rate of \$2.57 for each engraved plaque the worker makes. For this week, the person engraved 378 plaques. **(3 Marks)**
- D) A weed trimmer was purchased for \$40 and was marked up 60% on cost. For a July 4 sale, it was marked down 25%. After the sale, it was marked up 30%. On September 1, it was marked down 20%. Find the final selling price. **(8 Marks)**

### QUESTION FOUR

- A) Distinguish between a trade discount and a cash discount. **(4 Marks)**
- B) A scientific calculator has a list price of \$20. A trade discount series of 15/8/4 is offered. Find the net price of the calculator. **(6 Marks)**
- C) There are two ways to compute the time period when money is borrowed. One way is called exact time and the other is the ordinary time. Distinguish between the two. **(4 Marks)**
- D) Admiral Chauffeur Services borrowed \$600 at 9% for  $1\frac{1}{2}$  years to repair a limousine. Find the interest. **(6 Marks)**

**END**