



FACULTY OF BUSINESS

FINAL EXAMINATION

Student ID (in Figures) :

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Student ID (in Words) : _____

Course Code & Name : **MAT 1114 ESSENTIAL MATHEMATICS FOR BUSINESS**
Semester & Year : January – April 2020
Lecturer/Examiner : Rosnah Mohamad Noor
Duration : 2 Hours

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 2 parts:
PART A (40 marks) : THREE (3) short answer questions. Answer are to be written in the Answer Booklet provided.
PART B (60 marks) : THREE (3) structure type questions. Answer are to be written in the Answer Booklet provided.
2. Candidates are not allowed to bring any unauthorized materials except writing equipment into the Examination Hall. Electronic dictionaries are strictly prohibited.
3. This question paper must be submitted along with all used and/or unused rough papers and/or graph paper (if any). Candidates are NOT allowed to take any examination materials out of the examination hall.
4. Only ballpoint pens are allowed to be used in answering the questions, with the exception of multiple choice questions, where 2B pencils are to be used.

WARNING: The University Examination Board (UEB) of BERJAYA University College regards cheating as a most serious offence and will not hesitate to mete out the appropriate punitive actions according to the severity of the offence committed, and in accordance with the clauses stipulated in the Students’ Handbook, up to and including expulsion from BERJAYA University College.

PART A : SHORT ANSWER QUESTIONS (40 MARKS)

INSTRUCTION : **THREE (3)** short answer questions. Answer ALL questions in the Answer Booklet(s) provided.

Question 1

Substitute the given values into each equation. Round off your answer to 2 decimal place.

a) $y = 3x+2$, $x=5$ (3 marks)

b) $x=2p^2- 3p+6$, $p=-2$ (3 marks)

c) $y=7x-5$, $y=2.73$ (3 marks)

d) $y=x-5x^2+3$, $x=2.304$ (3 marks)

e) $x=y-3x$, $y = 5$ (3 marks)

(Total : 15 marks)

Question 2

Find the value of x and y

a) $2x+3y= 10$
 $5x+3y= 15$ (5 marks)

b) $3x+6y= 12$
 $x+3y= 9$ (5 marks)

(Total : 10 marks)

Question 3

a) Calculate rate of compounded semi – annually from RM2000 to RM3500 in five years. (10 marks)

b) Find the present value at 8% simple interest of a debt RM3000 due in ten months. (5 marks)

(Total : 15 marks)

END OF PART A

PART B : STRUCTURE TYPE QUESTIONS (60 MARKS)

INSTRUCTION(S): THREE (3) structure type questions. Answer ALL question in the answer booklet (s) provided.

Question 1

Calculate the future value of RM 30,000 which was invested for :

- a) 4 years at 4% compounded annually (3 marks)
- b) 5 years 6 months at 14% compounded semi –annually (3 marks)
- c) 2 years 3 months at 4% compounded quarterly (3 marks)
- d) 5 years 7 months at 5% compounded monthly (3 marks)
- e) 2 years 8 months at 9% compounded every 2 months (3 marks)

(Total : 15 marks)

Question 2

Using matrices, calculate the value of the unknowns in each of the following simultaneous equations.

- a) $x+y = 8$
 $y-x = 4$ (5 marks)
- b) $3p-q=1$
 $9p-4q+9=0$ (5 marks)
- c) $3b=2a+3$
 $5a-7b=2$ (5 marks)
- d) $7=2m-8n$
 $6=5m-2n$ (5 marks)

(Total : 20 marks)

Question 3

Based on the information, calculate depreciation for 8 years using:

Cost of the asset	RM 50,000
Useful life	8 years
Salvage value	Nil
Rate	40%

- a) Straight line method of depreciation (5 marks)
- b) Declining balance method of deprecation (10marks)
- c) Sum of the years digit method of depreciation (10 marks)

(Total : 25 marks)

END OF QUESTION PAPER