



Private & Confidential

FACULTY OF BUSINESS

FINAL EXAMINATION

Student ID (in Figures) :

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Student ID (in Words) : _____

Course Code & Name : **MAT 1513 MATHEMATICS FOR BUSINESS**
Semester & Year : January – April 2020
Lecturer/Examiner : Ms. Rosnah Mohamad Noor
Duration : 3 Hours

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 2 parts:
PART A (30 marks) : THIRTY (30) multiple-choice questions. Answers are to be written in the Answer Booklet provided.
PART B (70 marks) : FOUR (4) problem solving questions. Answers 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.

Total Number of pages = 8 (Including the cover page)

PART B**: PROBLEM SOLVING QUESTIONS (70 MARKS)****INSTRUCTION(S)**

: Answer all **FOUR (4)** questions. Write your answers in the Answer Booklet(s) provided.

Question 1

Calculate the value of the unknowns in each of the following simultaneous equations. Use the elimination method.

a) $x+y = 8$
 $2y-x = 4$ (5 marks)

b) $3p-q+1=0$
 $9p-4q+9=0$ (5 marks)

c) $3b=2a+3$
 $5a-7b=2$ (5 marks)

d) $7=2m-8n$
 $6=5m-2n$ (5 marks)

(Total : 20 marks)

Question 2

Determine the future value of RM 50,000 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 3

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

$7=2m-8n$
 $6=5m-2n$ (5 marks)

b) Solve the following system of equations by Cramer's rule:

$x+2y+3z=-5$
 $3x+y-3z=4$
 $-3x+4y+7z=-7$ (10 marks)

(Total : 15 marks)

Question 4

Sketch the graph, shade the region which satisfies the three inequalities below:

a) $y \geq x - 1$

$$y \leq \frac{1}{3}x + 1$$

$$y < 3$$

(10 marks)

b) $y \leq 2x + 5$

$$2y \geq x - 1$$

$$x > -2$$

(10 marks)

(Total :20 marks)

END OF QUESTION PAPER