

BERJAYA BUSINESS SCHOOL

FINAL EXAMINATION

Student ID (in Figures) :

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Student ID (in Words) : _____

Subject Code & Name : **STA1014 INTRODUCTION TO MATHEMATICS AND STATISTICS**
Trimester & Year : January - April 2017
Lecturer/Examiner : Ms. Faridah Hanum Amran
Duration : 2 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 of Hospitality 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 of Hospitality.

Total Number of pages = 10 (Including the cover page)

PART B : PROBLEM SOLVING QUESTIONS (70 MARKS)

INSTRUCTION(S) : **FOUR (4)** problem solving questions. Answer **ALL** questions in the Answer Booklet(s) provided.

Question 1

- a. A company has 30% white collar workers and 70% blue collar workers. 60% of the white collar workers and 40% of the blue collar workers believe that they would be financially secure for at least three months if they lose their job. What is the probability that a company employee believes that he would be financially secure for at least three months if he lost his job?. Support your answer with a tree diagram.

[Total: 10 marks]

Question 2

Use Cramer's rule to solve the simultaneous equations below:

$$-9x + 7y - 4z = 188$$

$$-3x + 2y - 1z = 56$$

$$-6x + 5y + 8z = 44$$

[Total: 20 marks]

Question 3

- a. State a suitable method of data collection for each of the following:
- i. To determine the acceptance level of a newly introduced soft drink. (2 Marks)
 - ii. To obtain the opinions of the public on the yearly renewal of driving licenses. (2 Marks)
 - iii. The Public Service Department wants to carry out a survey on students studying overseas under its sponsorship. The objective of the study is to collect information on the problems faced by them. (2 Marks)
- b. Find the equations of a straight line passes through the point (14,7) and has a slope of 5. (4 Marks)
- c. Solve using the quadratic method for $10x^2 - 11x - 6 = 0$ (10 Marks)

[Total: 20 marks]

Question 4

1. A survey of reading newspaper amongst villagers in Temerloh Pahang provided the following data on reading time (in hours) per week.

12	14	8	20	26
25	13	14	16	5
8	20	14	13	10

- a. Compute the mean, median and mode. (6 Marks)
- b. Find the first quartile and the third quartile. (8 Marks)
- c. Draw a box-and-whisker plot. (6 Marks)

[Total: 20 marks]

END OF QUESTION PAPER