Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2015/2016

COURSE NAME	:	RESEARCH AND STATISTICAL METHODS
COURSE CODE	:	DAS 20903
PROGRAMME	:	3 DAU
EXAMINATION DATE	:	DECEMBER 2015/JANUARY 2016
DURATION	:	2 HOURS 30 MINUTES
INSTRUCTION	:	SECTION A) ANSWER **ALL** QUESTIONS SECTION B) ANSWER **THREE (3)** QUESTIONS ONLY

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

SECTION A

Q1 (a) Explain the meaning of the following terms used in selecting sample:

(i) Simple random sampling

(2 marks)

(ii) Stratified random sampling

(2 marks)

(iii) Systematic sampling

(2 marks)

(iv) Area (Cluster) sampling

(2 marks)

(b) Choose three different types of basic modes of collecting data, and briefly describe circumstances of inappropriate of items appear in the questionnaires.

(8 marks)

(c) Outline the main advantage and disadvantages of a questionnaire.

(4 marks)

SECTION B

Q2 A research design may include one or both of random procedures.

(a) Explain the differences which can exist between the random selection and random assignment in sampling technique.

(6 marks)

(b) Briefly describe the concept of a random sample.

(4 marks)

(c) Discuss how the use of each of these procedures contributes to the meaningfulness and interpretation of the research outcome.

(10 marks)

Q3 When assessing the quality of test items, it is common to calculate the relationship between getting the item correct or incorrect and the total test score.

(a) Distinguish two correlations that satisfy this purpose.

(6 marks)

(b) Compare and contrast the assumptions of these two correlations.

(8 marks)

(c) Discuss the advantages and disadvantages of using each coefficient.

(6 marks)

Q4 There is a lot of discussion going on the usefulness of classical hypothesis testing as an indication of the importance of results.

(a) Discuss the concern with determining importance from classical hypothesis testing.

(6 marks)

(b) Explain how sample size and standard error contribute to this discussion. Give **two (2)** examples.

(10 marks)

(c) Define the meaning of alternative hypothesis.

(4 marks)

Q5

In experimental applications, a two-way ANOVA with one experimental factor and one blocking variable and an ANCOVA (or ordered regression analysis) with a covariate or quantitative contr variable are both ways of reducing experimental error.

(a) Contrast the research situations in which each would be appropriate.

(10 marks)

(b) Explain how each procedure leads to error reduction.

(10 marks)

END OF QUESTION