UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

BSc MLS degree programme

Year end examination – year 1- 6th Batch - 24th June, 2014

BASIC STATISTICS-Theory Structured essay questions

Answer all the questions. Use only the space provided for answering.

INDEX NO:..................................
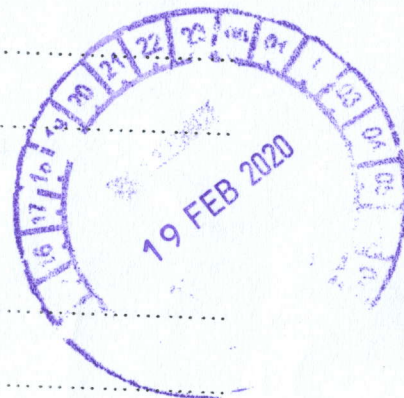
TIME: 9.00 am – 10.00am

⑩

1.

1.1 List three characteristics of the Z curve (15 marks)

a..

b..

c..

1.2 List three interval scale variables (15 marks)

a..

b..

c..

1.3 The HDL levels of a group of men (n=100) and women (n=100) were measured. In men, the average HDL level was 55 mg/dL ($SD = 10$ mg/dL). In women, the average HDL level was 60 mg/dL ($SD = 5$ mg/dL).

    1.3.1 Calculate the 95% CI for the population mean of HDL level in men

                                                     (20 marks)

    1.3.2. Calculate the 95% CI for the population mean of HDL level in women

                                                     (20 marks)

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1.3.3 Explain whether there is a significant difference of the mean HDL levels between men and women? (10 Marks)

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1.4 Explain the following terms.

    1.4.3 Quota sampling method (10 marks)

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    1.4.4 Correlation coefficient (10 marks)

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2. A study was conducted to determine whether there is any association between choice of medical laboratory services and level of education in people living in Galle. A total of 200 individuals were surveyed and 120 participants preferred government medical laboratory services and 80 preferred private medical laboratory services. Out of the 120 participants who preferred government medical laboratories, 50 had higher educational qualifications. Out of the 80 participants who preferred private medical laboratories, 40 had higher educational qualifications.

2.1 State null and alternative hypothesis. (20 marks)

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2.2 Draw a 2x2 table for the above data and calculate expected frequencies (40 marks)

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2.3 Test the hypothesis at 5% significance level. (20 marks)

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2.4 What can you conclude from the results? (20 marks)

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