



FACULTY OF ALLIED HEALTH SCIENCES, UNIVERSITY OF RUHUNA
Department of Medical Laboratory Science
Second End Semester Examination – July 2023 – 2020/2021 Batch
MLS 1232 Basic Statistics – Theory II (SEQ)

Date: 18th July 2023

Time: 10.45 a.m. – 11.15 a.m.

Duration: 30 minutes

Answer all questions

Index Number:

1.

1.1 List two probability sampling methods. 10 marks

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1.2 List two non-parametric tests 10 marks

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1.3 List two characteristics of correlation coefficient. 10 marks

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1.4 List two uses of Bio statistics in medical laboratory sciences. 10 marks

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1.5 In a study of white blood cell count in 100 children, the investigators found the mean of 900 mm3 and SD of 100 mm3 of white cell count in this sample. What is the Standard Error of the mean white cell count in this sample? 20 marks

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1.6 A study was conducted to identify average systolic blood pressure of a sample of 200 men. The sample mean was 130 mmHg and the SD was 10 mmHg. Calculate the 95% CI of the population mean of the systolic blood pressure. Interpret your result. 40 marks

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2. A 2 x 2 table was prepared using data from a sample to investigate a possible association between hypertension and obesity in adult women. Chi square test is used and the contingency table is given below.

		Hypertension	
		Yes	No
Obesity	Yes	50	20
	No	10	40

- 2.1 Write down the null hypothesis and alternative hypothesis. 20 marks

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- 2.2 Calculate the expected value for obese who are hypertensive positive. 10 marks

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- 2.3 What is the Degrees of freedom for chi square test used in the above study? 10 marks

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- 2.4 Suppose the calculated Chi square value of the above test is 30.85. Test the null hypotheses. 30 marks

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- 2.5 What is your conclusion? 30 marks

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