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## **UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE**

MEDICAL LABORATORY SCIENCE DEGREE PROGRAMME

Year End Examination Year 1 - 8th Batch - January, 2017

## BASIC STATISTICS (SEQ)

Monday 30th January 2017

Time: 10.00 am – 12.00 noon (two hours)

INDEX NO:

Answer all questions

1. Explain briefly the uses of statistics in Medical Laboratory Sciences.

ML5 - 1101

(100 marks)

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2.1 Gi	ve three examples for each of the following scales of measurements. (45 marks,
	the champles for each of the following scales of many
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	3
Interval	1
	1 2
	2
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Ratio	1
	12.
	2
2.2 The sa	mple mean of LDL level of a sample of 100 patients with hypertension was g/dL and the standard deviation was 10 mg/dL.
130 m	g/dL and the standard is in a sample of 100 patients with the
	g/dL and the standard deviation was 10 mg/dL.
2.2.1	Calculate the 050/
	Calculate the 95% confidence interval of the population mean. (40 marks)
	population mean. (40 marks)
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The sample mean of HDL cholesterol levels of 200 patients was 50 mg/dL with standard deviation of 20 mg/dL. 3.

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3.1 What percentage of patients had the cholesterol level less than 40 mg/dL? (30 marks)

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	s
3.2 What percenta	age of patients had the cholesterol level between 40 mg/dL and 60
mg/dL?	(40 marks)
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(35)

3.3 What percentage of patients had the cholesterol le	
est of patients had the cholesterol le	evel greater than on
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	(30 marks)
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Read the following data set and answer the questions given below.

Variable Haemoglobin (g/dL)	Mean	Maximum	Minimum	
DL (mg/dL)	18.5	22.0	IVALLER STREET	SD
DL (mg/dL)	120	200	10.5	3
holesterol (mg/dL)	50	80	80	20
Blood Pressure (mmHg)	230	290	30	10
	115	160	150	25
			105	10

4.1 Find the ranges for each of the above variables

(3.8)

Variable	
Haemoglobin (g/dL)	Range
LDL (mg/dL)	4
HDL (mg/dL)	
Cholesterol (mg/dL)	
Blood Pressure (mmHg)	Martine .
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(25 marks)

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4.2 Calculate the Coefficient of variation for the following variables (50 marks)

4.2.1. Haemoglobin (g/dL)

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4.2.2. Cholesterol (mg/dL)

4.3 Which one of the two variables in question given above has the greater variability? (25 marks)


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