UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF ARTS

SECOND YEAR EXAMINATION IN ARTS –SEMESTER II-2016/2017

SOC 2223 – SOCIAL STATISTICS

Two (02) Hours

Answer Four (04) questions only

Graph papers will be provided. Calculators can be used

1. 1.1 A frequency distribution of age obtained by a sample of **1500 household heads** is given below.

Age in years	Frequency
35 – 39	200
40 – 44	300
45 – 49	500
50 – 54	300
55 – 59	200
Total	**1500**

Using the above data calculate the following measures

(i) Mean of the age distribution (05 marks)

(ii) Standard Deviation of the age distribution (05 marks)

1.2 Briefly explain the following

(i) Syntax Window of SPSS software (05 marks)

(ii) Missing data (05 marks)

(iii) Variable view and data view of SPSS software (05 marks)

PTO

2. A frequency distribution of daily income in rupees obtained by a sample of **1000 households** is given below.

Daily income in Rupees	Frequency
200 – 249	100
250 – 299	150
300 – 349	250
350 – 399	100
400 – 449	150
450 – 499	250
Total	**1000**

Using the above data, calculate the following statistical measures

(i) Median (05 marks)

(ii) Mean (05 marks)

(iii) Standard Deviation (05 marks)

(iv) Based on the results obtained from the above measures explain conclusions that you can draw from daily income of sample households (10 marks)

3. Briefly explain the following

(i) Data editing and coding (05 marks)

(ii) Recode into same variable using SPSS software (05 marks)

(iii) Recode into different variable using SPSS software (05 marks)

(iv) 'Median cannot be calculated for nominal data' (05 marks)

(v) Scale data (05 marks)

PTO

4. From a sample of **eight (08) people,** their years of formal education and daily income in dollars are given below

X Formal Education (in years)	Y Daily Income (in dollars)
8	15
9	22
10	30
5	10
6	11
7	12
12	40
14	60

(i) Construct a scatter plot diagram for the above data (05 marks)

(ii) Find the regression line of Y on X (10 marks)

(iii Calculate the correlation coefficient of X and Y and comment on your results (10 marks)

5. (5.1) A frequency distribution of marks obtained for a social statistics exam paper by a sample of **100 students** is given below:

Marks	Frequency
40 – 49	02
50 – 59	28
60 – 69	48
70 – 79	20
80 – 89	02
Total	**100**

Analyse the above sample data using any two central tendency measures and a measure of dispersion of your choice (15 marks)

(5.2) From a sample of **six adults,** their weight (in Kg.) and blood sugar level are given below

X Weight (in Kg.)	Y Blood Sugar level (in mg/dl)
50	78
80	125
65	88
60	80
77	90
88	100

Analyse the correlation of X and Y variables using any statistical technique thatyou have studied (10 marks)

6. Briefly explain the following

(i) T Test (05 marks)

(ii) Multiple Regression (05 marks)

(iii) Correlation coefficient (05 marks)

(iv) Multiple response question and multiple response frequency table (05 marks)

(v) Selecting a simple Random Sample using SPSS software (05 marks)

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