



MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2012/2013

**SECOND YEAR SECOND SEMESTER EXAMINATIONS
FOR THE DEGREE OF BACHELOR OF ARTS IN URBAN
& REGIONAL PLANNING WITH INFORMATION
TECHNOLOGY
(MAIN CAMPUS)**

PUR 222: QUANTITATIVE TECHNIQUES

Date: 26th July, 2013

Time: 8.30 – 10.30 a.m.

PUR 222:Quantitative Techniques
Siriba Campus

Answer Question ONE and any other TWO

1. (a) State the relationship between arithmetic mean, median and mode. (5mks)

(b) From the data given below, locate graphically:

(i) median (ii) Q_1 (iii) Q_3 (iv) D_4 (v) P_{45} (15mks)

0.10	10.20	20.30	30.40	40.50	50.60	60.70	70-80
7	15	18	23	30	13	8	6

(c) Find the range and coefficient of range of the following distribution (10mks)

Class	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
Frequency	10	20	27	36	52	42	18	6

2. Calculate coefficient of variation (C.V.) from the following data (20mks)

Income	No. of employees
300-399	30
400-499	46
500-599	58
600-699	76
700-799	60
800-899	50
900-999	20

3. (a) Explain the terms skewness and kurtosis. (5mks)

(b) Calculate Karl Parsons coefficient of skewness from the following data (15mks)

Marks	No. of students
0-10	10
10-20	40
20-30	20
30-40	0
40-50	10
50-60	40
60-70	16
70-80	14

4. (a) Explain meaning and significance of correlation. (5mks)

(b) Following are the heights and weights of 10 students in a B.A. (Urban and Regional Planning) class.

Height (Inches)	62	72	68	58	65	70	66	63	60	72
Weight (kgs)	50	65	63	50	54	60	61	55	54	65

Draw the scatter diagram and indicate whether the correlation is positive or negative. (15mks)

5. Seven methods of imparting Planning education were ranked by Planning students of two universities as follows:

Method of teaching	I	II	III	IV	V	VI	VII
Rank by students of university A	2	1	5	3	4	7	6
Rank by students of university B	1	3	2	4	7	5	6

Calculate Spearman's Rank correlation coefficient and comment on its value. (20mks)

6. Using the following data, calculate the mean deviation (M.D) and its coefficient from the median. (20mks)

Wages \$	20	18	16	14	12	10	6	4
f	2	4	9	18	27	25	14	1