



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

SECOND YEAR SECOND SEMESTER EXAMINATIONS
FOR THE DEGREE OF MASTER OF ARTS IN
MONITORING AND EVALUATION
(CITY CAMPUS – EVENING)

PPM 823: QUANTITATIVE AND QUALITATIVE
TECHNIQUES

Date: 21st July, 2014

Time: 5.30 – 8.30 p.m.

INSTRUCTIONS:

- Answer ANY FOUR questions.



PPM 823

Quantitative and quantitative techniques

Answer any FOUR Questions

1. Compute the co efficient of variation (C.V) from the following data.15 marks

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

2. Find the first four moments from the following distribution.15 marks

| Class | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 |
|-----------|------|-------|-------|-------|-------|
| Frequency | 10 | 20 | 40 | 20 | 10 |

3. Calculate Bowley's co-efficient of skewness from the following data.15 marks

| Value | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 |
|-----------|-------|-------|-------|-------|-------|-------|-------|
| Frequency | 358 | 2417 | 976 | 129 | 62 | 18 | 10 |

4. Find out the trend values for the following time series of cement production by the method of moving averages using a five year period for your purpose.15 marks

| Year | Production |
|------|------------|
| 1979 | 351 |
| 1980 | 366 |
| 1981 | 361 |
| 1982 | 362 |
| 1983 | 400 |
| 1984 | 419 |
| 1985 | 410 |
| 1986 | 420 |
| 1987 | 450 |
| 1988 | 500 |
| 1989 | 518 |
| 1990 | 455 |
| 1991 | 502 |
| 1992 | 540 |
| 1993 | 557 |
| 1994 | 571 |
| 1995 | 586 |
| 1996 | 612 |

5. From the data given below, find:

- i) The two regression equations **7 marks**
- ii) The coefficient of correlation between marks in planning theory and quantitative techniques **4 marks**
- iii) The most likely marks in Q.T when the marks in P.T are 30 **.4 marks**

| | | | | | | | | | | |
|-------------------|----|----|----|----|----|----|----|----|----|----|
| Marks in P.T X | 25 | 28 | 35 | 32 | 31 | 36 | 29 | 38 | 34 | 32 |
| Marks in Q.T Y | 43 | 46 | 49 | 41 | 36 | 32 | 31 | 30 | 33 | 39 |

2014

6. John is throwing dice, find the probability that
- a) He gets a 3 or a 6 with a throw of dice. **5 marks**
 - b) He gets a 3 and a 6 with two throws of a dice. **5 marks**
 - c) He gets a total of 10 with 2 dice. **5 marks**