

Roll No. 7014220331

Total No. of Questions : 7] **Paper ID [MB104]** [Total No. of Pages : 02

J-710

(Please fill this Paper ID in OMR Sheet)

MBA (Semester - 1st)

QUANTATIVE TECHNIQUES (MB - 104)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

Q1)

(10 x 2 = 20)

- a) Z - test.
- b) Ideal Index Number.
- c) Properties of regression coefficients.
- d) Binomial distribution.
- e) One tail - two tail tests.
- f) Multiplication Theorem of Probability.
- g) Interval estimation.
- h) Matrix inverse.
- i) Coefficients of Variation.
- j) Mathematical Induction.

Section - B

(4 x 10 = 40)

Q2) Solve by Cramer's rule

$$3x + 3y - z = 11$$

$$2x - y + 2z = 9$$

$$4x + 3y + 2z = 25$$

Q3) Find the 14 Arithmetic means between 5 to 8 and show that their sum is 14 times the A.M. between 5 to 8.

Q4) In 1000 extensive sets of trials for an event of small probability, the frequency of number of X success proved to be.

X	0	1	2	3	4	5	6	7
F	305	365	210	80	28	9	2	1

Assuming it to be a poisson distribution, calculate the expected frequencies.

Q5) Calculate (i) Laspeyre's, (ii) Paasche's, (iii) Bowley's and (iv) Fisher's Index numbers for following data.

Items	2005		2006	
	Quantity	Value	Quantity	Value
A	10	120	12	156
B	50	700	40	600
C	15	240	25	475
D	12	216	15	240

Q6) The following table shows the result of inoculation against cholera in a certain state.

	Not Attacked	Attacked	Total
Inoculated	267	37	304
Non Inoculated	757	155	912
Total	1024	192	1216

Test whether inoculation against cholera is effective or not.

Q7) Discuss various components of a time series. Illustrate your answer with suitable examples.