

MP-304/204(New)

December - Examination 2019

**Master of Business Administration - II Year
Examination****Quantitative Techniques****Paper - MP-304/204(New)****Time : 3 Hours]****[Max. Marks :- 80**

Note: The question paper is divided into three sections A, B and C. Write answers as per given instructions.

Section - A**8 × 2 = 16****(Very Short Answer Questions)**

Note: Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

1. Answer the following questions:
 - i. Define Time series.
 - ii. What is Coefficient of Regression?
 - iii. What is the full form of CPM?
 - iv. Define differentiation.
 - v. What do you understand by Co-Factor of Determinant?
 - vi. Define Business forecasting.
 - vii. Write down the name of four types of mathematical model.
 - viii. Define EVPI.

Section - B**4 × 8 = 32****(Short Answer Questions)**

Note: Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 8 marks.

2. Write down the Properties of Regression Coefficient.
3. Critically identify the role of operational research in decision making.
4. Write a note on opinion poll.
5. Is there a relationship between the sugar content and the number of calories in 12ml cough syrup? To determine if there is a random sample was taken of cough syrups sugar content and calories data in given table. Find the regression equation from the formula.

Sugar content	Calories in 12 ml.
4.70%	163
6.70%	215
8.10%	222
0.40%	70
4.15%	104
5.10%	162
5.00%	158
5.00%	155
4.70%	158
6.20%	195

6. Find the rank correlation between the width and depth of river banks of a river at different places as under:

Width (in cm.)	0	50	150	200	250	300	350	400	450	500
Depth (in cm.)	0	10	28	42	59	51	73	85	104	96

7. Write down the Characteristics of a Good Model
8. Write a note on Bayesian Decision Rule.
9. Write a note on Time Reversal Test.

Section - C

$2 \times 16 = 32$

(Long Answer Questions)

Note: Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 16 marks.

10. Write a note on the following :
- Normal Distribution
 - Poisson Distribution
11. "Index numbers are the devices for measuring differences in the magnitude of a group of related variables." Discuss this statement and point out the important uses of index numbers.
12. What do you mean by probability? Discuss the major approaches of Probability.
13. Write short note on the following:
- Deterministic decision Model
 - Probabilistic decision Model