

- 8 Write short notes on the following :
- (i) Linear Relationship
 - (ii) Dual Problem
 - (iii) Optimal Solution
 - (iv) Degenerate Solution
9. Discuss the essentials of Business Forecasting and explain various techniques and tools of it.

MP-204/MP-304 (Old)

June – Examination 2022

Master of Business Administration (II Year) Examination

Quantitative Techniques

Paper : MP-204/MP-304 (Old)

Time : 1½ Hours]

[Maximum Marks : 80

Note :- The question paper is divided into two Sections A and B. Write answers as per the given instructions.

Section-A

4×4=16

(Very Short Answer Type Questions)

Note :- Answer any *four* questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries 4 marks.

1. (i) Define Elements of Matrix.
- (ii) Explain dependent and independent variables.
- (iii) Explain coefficient of Optimism Criterion.
- (iv) Explain Mutually Exclusive Event.
- (v) What do you mean by Trend ?
- (vi) Explain the limitations of Operations Research.
- (vii) What do you understand by Critical Path ?
- (viii) Explain the meaning of Saddle Point.

Section-B **4×16=64**

(Short Answer Type Questions)

Note :- Answer any *four* questions. Each answer should not exceed **200** words. Each question carries 16 marks.

2. Describe some of applications of Game Theory.
What are its limitations ?
3. Describe the role of operations research techniques in Business and Industry.
4. Explain the following terms used in PERT Technique :
 - (i) Optimistic Time
 - (ii) Event Variance

(iii) Dummy Activity

(iv) Pessimistic Time

5. Following are two regression equations :

$$x + 3y - 11 = 0 \text{ and } 2x + 2y - 10 = 0 \text{ and}$$

$$\sigma_x^2 = 16, \text{ then find out } \bar{x}, \bar{y}, \sigma_y^2 \text{ and } r.$$

6. Explain and illustrate the following theorems of probability :

(i) Simple and Compound Events

(ii) Dependent and Independent Events

(iii) Mutually Exclusive and Compound Events

7. Construct Fisher's Ideal Index with the help of the following data :

Commodity	2020		2021	
	Price	Quantity	Price	Quantity
A	2	50	4	30
B	3	40	5	50
C	4	30	6	40
D	5	20	7	10