



JBE-19MBA-102 Seat No. _____

M. B. A. (Sem. I) (CBCS) Examination

December – 2019

Quantitative Techniques in Management 19MBA-102

Time : 3 Hours]

[Total Marks : 70

Instruction : All questions carry equal marks.

1 What is Operations Research (QT)? Explain with the help of suitable examples how it will be helpful in taking business decisions.

OR

1. What is meant by a Transportation problem. Explain the various methods to solve it with help of suitable examples.

2 (A) What is the Consumer Panel Survey method of making forecast. Discuss the advantages and limitations of it

(B) What are the major comparative characteristics of the PERT model and CPM model? What are their limitations, if any ? Discuss.

OR

2 Solve the following assignment problem and obtain minimum total time for doing all jobs

Clerk	Job				
	1	2	3	4	5
A	6	2	5	2	6
B	2	5	8	7	7
C	7	8	6	9	8
D	6	2	3	4	5
E	9	3	8	9	7
F	4	7	4	6	8

3 What is a game theory? State the assumptions underlying it. Discuss its importance to business decisions.

OR

- 3 From the following information draw a network diagram. Obtain a critical path and also calculate Total Float, Free Float and Independent Float.

Activity	A	B	C	D	E	F	G	H
Predecessor Activity	-	-	-	A	A	A	B,D	C,E
Duration (Days)	3	6	2	4	2	7	4	3

- 4 (A) What is a time series forecasting model? Explain the principle underlying the trend line.
 (B) Discuss the Delphi method of making forecast.

OR

- 4 Determine the optimal strategies and the value of the game from the following.

A	B			
	B ₁	B ₂	B ₃	B ₄
A ₁	-5	16	13	15
A ₂	20	-5	60	-70
A ₃	-5	9	12	10
A ₄	-20	-2	-50	-80

- 5 Given the following transportation problem :

Warehouse	Market			Supply
	1	2	3	
A	10	12	7	180
B	14	11	6	100
C	9	5	13	160
D	11	7	9	120
Demand	240	200	220	

It is known that nothing can be sent from warehouse A to market 1 and from warehouse C to market 3. From the information given above obtain an initial solution using VAM