

MASTERS OF BUSINESS ADMINISTRATION
(SUPPLY CHAIN MANAGEMENT)
(MBASCMFL)

Term-End Examination

June, 2013

MCQ-021 : QUANTITATIVE TECHNIQUES OF
SUPPLY CHAINS - 3

Time : 2 hours

Maximum Marks : 50

Note : Attempt *any five* questions. All questions carry equal marks.

1. Differentiate between the following :
 - (a) Stimulation and mixed models 5
 - (b) Deterministic models and probabilistic models 5
2. What do you understand by Convexity of Model ? 10
How the Convex linear model is different from Non-convex linear model ?
3. What is purpose of Bayesian analysis ? Describe 10
how you would use Bayesian analysis in the decision making problems.
4. Describe business situation where a decision 10
maker faces a decision under uncertainty and where a decision based on maximizing the expected monetary value can not be made.

5. Explain the following terms while giving a suitable example :
- (a) Multi Agent Systems (MAS). 5
- (b) Cooperative and Non-Cooperative Game. 5
6. Describe the maximum principle of game theory. 10
Explain difference between "pure strategies" and 'Saddle point' ?
7. A product is manufactured to satisfy demand over a 4-period planning horizon according to the following data : 10

Period	Unit of demand	Unit production cost (\$)	Unit holding cost (\$)
1	100	24	1
2	110	26	2
3	95	21	1
4	125	24	2

Given that no back-ordering is allowed, represent the problem as a network model.

8. Write the augmented path algorithm for the maximum flow problem. 10
