

Subject Code: MB1316/R13

M B A I Semester Regular Examinations, Feb-2014

QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS

Time: 3 hours

Max Marks: 60

Answer any FIVE of the following

All questions carry equal marks. Q.No.8 is compulsory

1. What is decision tree? Explain the construction of it with a suitable example.
2. Solve the following LPP using the Simplex method?

$$\begin{array}{ll} \text{Maximize} & Z=50X + 30y \\ \text{Subject to} & 4X + 2Y \leq 10 \\ & 2X + 2Y \leq 8 \\ & X, Y \geq 0 \end{array}$$

3. The following data show the number of seeds germinating out of 10 on damp filter for go set of seeds. Fit a Binomial Distribution to this data;

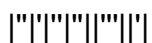
X	0	1	2	3	4	5	6	7	8	9	10
Y	6	20	28	12	8	6	0	0	0	0	0

4. What is the optimal strategy in the game described by the matrix?

Players A & B Strategies

-5	3	1	20
5	5	4	6
-4	-2	0	-5

5. a) Distinguish between Correlation and Regression?
b) Derive two regression lines and explain with suitable examples?
- 6 How will you solve an Assignment problem where a particular Assignment is prohibited?



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7. A project has the following time schedule;

Activity	Time in months	Activity	Time in months
1-2	2	4-6	3
1-3	2	5-8	1
1-4	1	6-9	5
2-5	4	7-8	4
3-6	8	8-9	3
3-7	5		

Draw a network and compute;

- (a) Critical path and its duration
- (b) Total float for each activity

8. CASE STUDY :

The Capitan of Cricket team has to allot Five middle batting positions to Five batsmen. The average runs scored by each bats man at these positions are as follows.

Batting position \ Batsmen	1	2	3	4	5
P	40	40	35	25	50
Q	42	30	16	25	27
R	50	48	40	60	50
S	20	19	20	18	25
T	58	60	59	55	53

- a). Find the assignment of batsmen to positions which would give the maximum number of runs
- b). If another batsmen U with the following average runs with the batting positions as given below;

Position	1	2	3	4	5
Runs	45	52	38	50	49

Is added to the team, should he be included to play in the team? If so, whom he will be replace?

