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Subject Code: MB916/R09 M B A - I Semester Regular/Supply Examinations, Dec/Jan – 2015-16 QUANTITATIVE ANALYSIS FOR BUSINESS DECISION

Time: 3 hours

Max Marks: 60

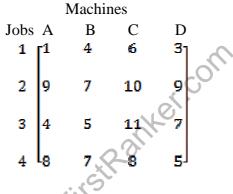
Answer any <u>**FIVE**</u> of the following

All questions carry equal marks. Q.No.8 is compulsory \mathbf{Q}

- 1. What are the criteria for decision making?
- 2. Solve the following linear programming problem?

 $\begin{array}{ll} Max \; Z{=}5X_1{+}3X_2 \\ STC & 3X_1{+}5X_2{\leq}15 \\ & 5X_1{+}2X_2{\leq}10 \\ & X_1\; X2{\geq}0 \end{array}$

3. Solve the following assignment problem?



4. Determine the optimum strategies for the game?

. p.			В			
2		1	2	3		
2	1	2	-2	4		
А	2	-1	4	2		
	3	2	1	6		

5. 5 coins are tossed 3200 times and the number of heads appearing each time is noted at the end. The following results were obtained.

Number of heads	0	1	2	3	4	5
Frequency	80	590	1100	900	500	300



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6. The following data relate to radio advertising expenditures, news paper advertising expenditures and sales. Fit a regression $y=a+b_1x_1+b_2x_2$.

Radio advertising expenditure(X1)	4	7	9	12
News paper advertising expenditure (X ₂)	1	2	5	8
Sales (Y)	7	12	17	20

7. To assess the significance of possible variation in performance in a certain test between grammar schools of city, a common test was given to a number of students taken at random from the senior 5th class of each of the 4 schools concerned. The results are given below. Make an analysis of variance of data.

SCHOOLS					
Α	B	C	D		
8	12	18	13		
10	11	12	9		
12	9	16	12		
8	14	6	16		
7	4	8	15		
LO.					

8. CaseStudy:

A small project is compose of activity whose time estimated are listed in the table below.

- a) Draw the project network?
- b) Find the expected duration and variance for each activity, what is the expected project length?
- c) Calculate the variances of the project length?
- d) Where is the probability of project completion earlier than 4 weeks?

	Estimated	duration	weekly
Activity	а	m	b
1-2	1	1	7
1-3	1	4	7
1-4	2	2	8
2-5	1	1	1
3-5	2	5	14
4-6	2	5	8
5-6	3	6	15

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