Subject Code: MB916

MBA I Semester [R09] Regular Examinations, January 2010

QUANTITATIVE ANALYSIS FOR BUSINESS DECISION

Time: 3 Hours **Max Marks: 60**

Answer any Five Questions. All questions carry EQUAL marks

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1. Describe the "maximin" principle of game theory. What do you understand by pure strategies, mixed strategies and saddle point?

2. What is probability introduction to decision theory? Explain the steps in decision making.

3. By using the following data , find out the two lines of regression and from them compute the Karl Pearson's coefficient of correlation

   $\sum x = 250$, $\sum y = 300$, $\sum xy = 7900$

   $\sum x^2 = 6500$, $\sum y^2 = 10000$, $n=10$

4. a) Explain the meaning, scope and methodology of Operation Research
   b) Discuss the significance and scope of Operation Research in modern management

5. What is χ^2 test? What are the assumptions for the test? What type of conclusion you can draw using it? Explain.

6. A machine operator process 5 types of items on his machine each week and must choose sequence for them. The set up cost per change depends on the items presently on the machine and item to be made, according to the table

To item

From item	A	B	C	D	E
A	∞	4	7	3	4
B	4	∞	6	3	4
C	7	6	∞	7	5
D	3	3	7	∞	7
E	4	7	5	7	∞

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If he produces each type of item once and only once each week, how should he sequence item on his machine in order to minimize total setup cost.

7. Define the terms slack, float, EST, EFT, LFT, LST. Explain with an example of your choice

8 A test was given to 5 students chosen at random from the M.Com., class of each of the three universities in Bihar. Their scores were found on follows

University	Scores				
A	90	70	60	50	80
B	70	40	50	40	50
C	60	50	60	70	60

Perform analysis of variance (ANOVA) and show if there is any significant difference between the scores of students in the three universities

(Given f – 5% = 3.44)