

## End-Semester Examination : Statistics for Decision Making 1

Duration: 2 Hrs.

Date: 11<sup>th</sup> Nov. 2015

- Note:** 1. Answer as much as you can. Maximum you can score is 50.  
2. Use of calculator, RMMR Tables allowed.

1. a) Using Random Number Table in "RMMR Tables", Generate 20 Random numbers (4-digit).  
b) Use these random numbers to generate 20 Random Samples from a Normal distribution with a Mean of 34 and a Std. Dev. of 4. [15]
2. State and briefly explain different methods of Sampling [10]
3. A firm administers a test to Sales Trainees before they are sent to the field. The management of the firm is interested to determine the relationship between the Test Scores (T) and the sales made by the trainees at the end of one year in the field (S), if any.  
The following data were collected for 10 sales personnel who have been in the field for one year :

Salesperson No.	Test score (T)	No. Of Units Sold (S)
1	2.6	95
2	3.7	140
3	2.4	85
4	4.5	180
5	2.6	100
6	5.0	195
7	2.8	115
8	3.0	136
9	4.0	175
10	3.4	150

- a) Plot Scatter Diagram to explore the relationship and offer your comments.  
b) Find the Correlation Coefficient.  
c) Find out the Regression Line.  
d) Using the Regression Line, estimate that  
If a Sales Trainee Mr. Ramesh gets a score of 4.2 at the test, what can you predict as his estimated sales in the coming year?

[20]

4. The following data gives the time taken (in minutes) to reach the railway station from ISI on 20 different occasions.  
Find the Mean, Standard Deviation, Skewness, Kurtosis of the time taken.

17	32	21	22	29	19	29	34	32	22
28	33	52	29	43	39	44	34	30	41

[10]

5. State and briefly explain different methods of generating Random Numbers. [10]