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MCN-038

MASTER OF BUSINESS ADMINISTRATION EVERONN (MBAEV)

00763

Term-End Examination

June, 2012

MCN-038 : QUANTITATIVE TECHNIQUES

Time : 3 hours *Maximum Marks : **100***

Note : *Attempt **any five** questions.*

1. Given is the following information **20**

	X	Y
Mean	39.5	47.5
S.D	10.8	17.8

simple correlation coefficient between X and Y is $= +0.42$.
Find the estimating equation of Y as well as of X.

2. Explain the meaning of analysis of variance. Discuss the techniques of analysis of variance for one - way and two way classification. **20**

3. A Sample of 10 is drawn randomly from a certain population. The sum of squared deviations from the mean is 50. Test the hypothesis that the variance of the population is 5 at 5% level of significance. **20**

4. "Sampling is necessary under certain conditions." Explain the advantages of stratified sampling over random sampling. **20**

5. What is an assignment problem ? Give its area of applications. How can you maximise an objective function in an assignment problem. **20**

6. Calculate the loss table from the following payoff table : **20**

Strategies	Events			
	E_1	E_2	E_3	E_4
A_1	50	300	– 150	50
A_2	400	0	100	0
A_3	– 50	200	0	100
A_4	0	300	300	0

if the probabilities of the events are $P(E_1) = 0.15$, $P(E_2) = 0.45$, $P(E_3) = 0.25$, $P(E_4) = 0.15$. Calculate the expected payoff and expected loss of each action.

7. A random sample of size 12 selected from a normal population has a standard deviation $s = 2.4$. construct 95% Confidence interval for **20**
   (a) variance σ^2, and
   (b) standard deviation σ.

8. 4 coins were tossed 100 times. The number of tails that appeared each time are as follow : **20**

No. of tails	0	1	2	3	4
frequency	18	20	24	20	18

using 0.1 level of significance, determine if the coins are unbiased.