

00685

**MASTER OF BUSINESS ADMINISTRATION  
EVERONN (MBAEV)**

**Term-End Examination**

**December, 2013**

**MCN-038 : QUANTITATIVE TECHNIQUES**

*Time : 3 hours*

*Maximum Marks : 100*

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**Note :** *Attempt any five questions. All questions carry equal marks.*

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1. (a) "Statistics is a tool that enables us to impose order on the disorganized difference of the real world of modern society". Explain the above statement with the help of a suitable example. **10+10**  
(b) In what circumstances is a significance test based on the 't' distribution used in preference to a significance test based on the normal distribution ?
  
2. (a) What do you mean by Statistical Error ? Give the difference between Mistake and Error ? **10+10**  
(b) What is Geometric Mean ? Give Algebraic Characteristics of Geometric Mean and state when Geometric Mean is useful.
  
3. (a) Give examples of two variables that are positively correlated and negatively correlated ? Suggest the suitable method for finding the correlation coefficient for each pair. **10+10**

- (b) A researcher wished to determine if a person's age is related to the number of hours he or she exercises per week. The data obtained from a sample is given. State your opinion based on Karl Pearson's coefficient of correlation for the data.

Age $x$	18	26	32	38	52	59
Hours $y$	10	5	2	3	1.5	1

4. (a) Why is it important to group data ? **4x5=20**  
 (b) How do you work out the weighted mean ?  
 (c) What is meant by the standard error of the mean ?  
 (d) What is the difference between a one and two tail test ?
5. Four persons A, B, C and D are to be assigned four jobs I, II, III and IV. The cost matrix is given as under, find the proper assignment. **20**

Man/Jobs	A	B	C	D
(I)	8	10	17	9
(II)	3	8	5	6
(III)	10	12	11	9
(IV)	6	13	9	7

6. Explain **any two** of the following Statistical Symbols with it's impact. **10+10**
- (a)  $H_0$                       (b)  $S^2$                       (c)  $\mu$

7. Briefly comment on **any two** of the following : **10+10**
- (a) At the planning stage of a statistical investigation, the question of sample size (n) is critical.
  - (b) Randomness means unpredictability.
  - (c) A parameter is an unknown value, and therefore it has to be estimated.
8. Write short notes on **any two** of the following : **10+10**
- (a) Deviation from mean
  - (b) Discrete and Continuous Series
  - (c) Goodness-of-fit
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