

**MASTER OF BUSINESS  
ADMINISTRATION RETAIL SERVICES  
(MBARS)**

**00101 Term-End Examination  
June, 2015**

**MRS-011 : QUANTITATIVE TECHNIQUES**

*Time : 3 hours*

*Maximum Marks : 100*

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

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1. (a) What do you mean by Dispersion ? Give the meaning of Absolute Measure and Relative Measure with examples. 10
  - (b) Statistics is a science of making decisions with respect to the characteristics of a group of persons or objects on the basis of numerical information obtained from a randomly selected sample of the group. Explain the above statement with the help of a suitable example. 10
  2. (a) How many types of Series are there on the basis of Quantitative Classification ? Give the difference between Exclusive and Inclusive Series. 10
  - (b) What do you mean by quartiles ? How does it differ from percentile ? Explain with the help of a suitable example. 10

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
- (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 : 10

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

4. (a) What is the probability of obtaining exactly 4 heads in 6 flips of a fair coin ? 10
- (b) What is Geometric Mean ? Give the Algebraic characteristics of Geometric Mean and state when Geometric Mean is useful. 10
5. Distinguish between any **two** of the following : 2×10=20
- (a) One-way and Two-way correlation
- (b) Mode and Median
- (c) Mean Deviation and Standard Deviation
6. Explain the following terms with the help of an example : 4×5=20
- (a) Chi-Square
- (b) Type-I and Type-II Error
- (c) Matrix Algebra
- (d) Moments

7. Briefly comment on any *two* of the following: 2×10=20

- (a) Can the first quartile equal the third quartile?
- (b) Is the sample mean always the most frequently occurring value?
- (c) Larger sample provides more relevant information, and as a result a more accurate estimation and better statistical judgement.

8. Write short notes on any *two* of the following: 2×10=20

- (a) Essentials of an Ideal Average
  - (b) Inter-Quartile Range
  - (c) Hypothesis testing
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