

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

Term-End Examination

June, 2012

MRS-011 : QUANTITATIVE TECHNIQUE

Time : 3 Hours

Maximum Marks : 100

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

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1. (a) Point out the necessity, usefulness and limitations of graphical representation of frequency distributions. 10
 - (b) Explain different ways of data classification and explain the importance of classification in statistics. 10

 2. (a) Discuss the merits and demerits of arithmetic mean, geometric mean and harmonic mean. 10
 - (b) The average salary of male employees in a firm was Rs. 520 and that of females was Rs. 420. The mean salary of all the employees was Rs. 500. Find the percentage of male and female employees. 10

3. (a) Find the 4th decile and 60th percentile for 10
the following distribution.

Marks	0 - 4	4 - 8	8-12	12-14	14-18	18-20	20-25	25 above
No of Students	10	12	18	7	5	8	4	6

- (b) What do you mean by scatter - diagram ? 10
How is scatter diagram used to determine correlation ?
4. (a) A sample of 12 fathers and their eldest sons 10
give the following data about their height in inches :

Father	65	63	67	64	68	62	70	66	68	67	69	71
Son	68	66	68	65	69	66	68	65	71	67	68	70

Calculate the co-efficient of rank correlation.

- (b) The following results were obtained from 10
marks in Quantitative Techniques
Quantitative Analysis in an examination :

	Quantitative Analysis (y)	Quantitative Technique (x)
Mean	39.5	47.5
Standard Deviation	10.8	16.8

$$r = 0.95$$

Find both the Regression equations.

5. (a) Describe the components of a time series. 10
Illustrate them with suitable examples.
- (b) Explain the fixed base and chain base 10
methods of construction of an index
number. Describe their relative merits and
demerits.
6. (a) The probabilities of A, B and C solving a 10
problem are $\frac{1}{3}$, $\frac{2}{7}$ and $\frac{3}{8}$ respectively. If all
the three try to solve the problem
simultaneously, find the probability that the
problem will be solved.
- (b) Distinguish between : 10
- (i) Sample and Population
- (ii) Point estimate and Interval estimate
- (iii) Parameter and Statistic
7. (a) Write the parameter of the following 10
distributions :
- (i) F distribution
- (ii) χ^2 distribution
- (b) Distinguish between : 10
- (i) Type I error and Type II error
- (ii) One-way and Two way
classification used in the analysis of
variances.

8. (a) What is major purpose of hypothesis testing? Explain the various steps involved in hypothesis testing. 10
- (b) Write a short note on : 10
- (i) Demargan's law
 - (ii) t test
 - (iii) The Kruskal - Willis Test.
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