QUANTITATIVE METHODS

SECTION ' A'. 5 x 10 = 5

(Total 10 Question, Attempt ALL, write correct option in space provided in assignment sheets)

01.   Objective type questions.

A.   .... is the most representative average in the construction of index numbers ?

    a) Geometric mean

    b) Harmonic mean

    c) Median

    d) Mode

B.   .... is a number that measures a relative change in a single variable with respect to a base ?

    a) Simple Regression

    b)   Error Variance

    c)   Index number

    d) Simple index number

C.   .... is also called as random sampling with replacement.

    a) Equal Probability

    b) Stratified sampling

    c) Proportionate Stratified Sampling

    d) None of the above

D.   Stratified sampling is of two types, i.e. Proportionate stratified sampling and........................?

a) Equal Probability

b) Stratified sampling

c) Disproportionate stratified sampling

d) None of the above

E. Analysis of variance is a Statistical Metrol of Comparing the .... of several Populations.

a) Standard deviations

b) Variances

c) Mean

d) None of the above

F. The non- Parametric equivalent of an unpaired sample test is.

a) Sign test

b) Wilcoxon signed - rank test

c) Mann- Whitney U test

d) Kruskal Wallis test

G. First step in time- series analysis is to.

a) Perform Preliminary regression calculation

b) Calculate a moving average

c) Plot the data on a graph

d) Identify relevant correlated variables

H. Trent projection is an example of which kind of casting?

a) Qualitative

b) Time- series

c) Barometric

d) Econometric

I. Which of the following methods is used to verify the optimality of the current Solution of the transportation problem?

a) Least cost method

b) Vogal's approximation method

c) Modified distribution method

d) All of the above

J. The method used for solving an assignment problem is called?

a) Reduced matrix method

b) Modi method

c) Hungarian methods

d) None of the above

SECTION ' B'. 1 x 5 = 5

(Total 10 Question, Attempt FIVE, question as per internal choice, write in space provided in assignment sheets)

02. What is Correlation ?
>   OR

What do you mean by Index number ?

03. What is Probability ?
>   OR

What is normal distribution?

04. What do you mean by sampling?
>   OR

What is estimation?

05. What is Hypothesis ?
>   OR

What is Chi- Square test?

06. Define Linear Programming?

OR

Why Linear Programming is used ?

07. What is measure of Central Tendency? Briefly Explain.

OR

'A sample is a part of target Population, Which is carefully selected to represent the population' Explain.

08. Explain the signification of the analysis of variance.

OR

Explain the meaning and the objective of times series analysis.

09. What are the essentials of Linear Programming Model ?

10. State the conditions under which binomial probability model is appropriate.

OR

What do you understand by Estimation Briefly Explain?

11. Explain the nature of a two- way analysis of variance. Write down
a   general ANOVA table for a two-way classification.

OR

Briefly explain decision Tree analysis.

12. What do you mean by Transportation Problem? Briefly Explain.

(Total 2 Question, any one,   write in space provided in assignment sheets)

13. Consider the following assignment problem :

Destination	Unit cost (Rs.)				Supply
	1	2	3	4	
Source					
1	30	61	45	50	1
2	25	54	49	52	1
3	27	60	45	54	1
4	31	57	49	55	1
Demand	1	1	1	1	

(a)   Draw the network representation of the assignment problem.

(b)   Formulate a linear programming model for the assignment
      problem.

<div align="center">OR</div>

Calculate coefficient of correlation between advertisement cost
and sales as per data given below :

Advertisement Cost in '000 Rs.	39	65	62	90	82	75	25	98	36	78
Sales in Lakh Rs.	47	53	58	86	62	68	60	91	51	84