MBA (Sem.-1st)
QUANTITATIVE TECHNIQUES
Subject Code: MBA-104
Paper ID: [C0104]

Time: 3 Hrs.   Max. Marks: 60

INSTRUCTIONS TO CANDIDATE:

1. **Attempt any four question from Section –A**
2. **Attempt any four questions in all from Section-B. Selecting One question from each unit**
3. **Section-C is compulsory .**

Section –A   (4x5=20)

Q1.

(a)   Discuss the importance of Coefficient of Variance in Management Analysis.

(b)   Explain the various steps in testing of hypothesis.

(c)   Discuss the test of significance for small sample.

(d)   What are index numbers? How are they used in analysis of data ?

(e)   List the components of time series analysis.

(f)   What is the role of random variables in management analysis ?

Section –B   (4x8=32)

-I)

Q2. (a) Discuss the role of statistical analysis in managerial decision making.

(b) Explain the primary & secondary sources of collection of data.

OR

A purchasing agent obtained samples of lamps from 2 suppliers. He had the samples tested in his own laboratory for the length of life of lamps with the following results. Which supplier's lamps are more uniform with respect to length of lives?

Life of bulbs in hours	700-900 hrs	900-1100 hrs	1100-1300 hrs	1300-1500 hrs
Supplier A	10	16	26	8
Supplier B	3	42	12	3

(Unit-II)

Q3. An automobile manufacturer tabulates the following information about age groups and the Liking for a particular model of the car which it plans to introduce.On the basis of this data, Can it be concluded that the car model appeal is independent of the age group?

(Given for $v=3, \chi^2=7.815$)

		Age Group (in years)				
		Below 20	20-30	30-40	40-50	Total
Persons who	*Liked the car*	140	80	40	20	280
	Disliked the car	60	50	30	80	220
	Total	200	130	70	100	500

OR

The Sales data of an item in 6 shops before and after a special promotional campaign is as Under. Can the campaign be judged to be a success ?(Given for $v=5$, t=2.02)

Shops	A	B	C	D	E	F
Sales Before campaign	53	28	31	48	50	42
Sales After campaign	58	29	30	55	56	45

(Unit-III)

Q4. (a) Discuss the uses and significance of index numbers? Further discuss the methods of construction of different Index numbers.

(b) What is standard error in regression analysis ?

OR

The following table gives the age of cars of a certain make and annual maintenance costs. Obtain the regression equation for costs related to age.Also find out the maintenance cost Of a car whose age is 12 years old.

Age of Cars (in years)	2	4	6	8
Maintenance Cost (in thousand Rs.)	10	20	25	30