Business Statistics

3rd Sem,GE,Paper
BCOMHGE 301
Model questions

Unit-I Fundamentals

Marks 1/2

i) Define Statistics

ii) Write two limitations of statistics

iii) What is Attribute?

iv) What is Variable?

v) Difference between Primary data and Secondary data

vi) What are the methods of data collection?

vii) What is frequency?

Marks 5/10

Problems

i) Tabulation of data, graphs and chart

ii) Diagrammatics presentation of frequency distribution – Histogram, Frequency polygon and ogives.

Unit-II Descriptive Statistics

Marks 1/2

i) What do you mean by measure of central tendency?

ii) Write notes on:-

a) Arithmetic mean

b) Geometric mean

c) Harmonic mean

iii) What do you mean by "weighted mean"? Explain with example

iv) Define:-

a) Mean

b) Median

c) Mode

V) Write notes on:-

a) Quartiles b) deciles c) relation among mean, median and mode

vi) Find the mean and mode of the following nos:-

2,4,3,5,3,4,5,1,7,3,2,1

vii) Find the median of the nos:-

12,48,30,112,62,94,75,98

viii) Calculate the AM, GM and HM of four numbers 3,6,24,28

ix) What do you mean by a measure of dispersion?

x) What are the different measures of dispersion?

xi) Distinguish between absolute and relative measure of dispersion

xii) Define

a) Standard deviation
b) Variance
c) Mean deviation
d) Quartile deviation
e) Coefficient of variation
f) Square deviation
g) Coefficient of variance
h) Root mean square deviation

xiii) Define moments

xiv) Explain the terms skewness and kurtosis

xv) Find the first, second and third moment about the origin 4 for the set of numbers 2,4,6,8

xvi) Define word Pearson's, measure of skewness.

xvii) Distinguish between absolute and relative measure of skewness

xviii) Problems on mean, median & mode

xix) Problems on S.D., Range, Q.D., variance and different coefficient.

Unit-III Simple Correlation and Regression Analysis

Marks 1/2

i. Define the term correlation
ii. What do you mean by-
    a) Positive and Negative Correlation
    b) Linear and Non-linear correlation
iii. What is scatter diagram?
iv. What do you mean by the coefficient of correlation?
v. Define Rank correlation
vi. Show that coefficient of correlation value lies between -1 and +1
vii. What are regression lines?
viii. Write regression equations
ix. What are regression coefficients?
x. Write properties of regression coefficient?

Marks 5/10

i) Problems on coefficient of correlation between the variables.

ii) Problems on Pearson's coefficient of correlation

iii) Problems on coefficient of rank correlation

iv) Problems on regression equations

v) Calculate the coefficient of rank correlation from the following data:-

X:- 48 33 40 9 16 16 65
Y:- 13 13 24 6 15 4 20

vi) Compute the two regression coefficient and the value of "r"

X:- 7 4 8 6 5
Y:- 6 5 9 8 2

vii) State 2 properties of linear regression. Calculate regression coefficients for the following information.

$$\sum x=50, \sum y=30, \sum xy=1000, \sum x^2=3000, \sum y^2=1800, n=10$$

Unit- IV Index No

Marks 1/2

i) What is Index Number?

ii) Write the importance of "base year" in calculating index no

iii) What do you mean by price index number?

iv) Write uses of Index number

v) What do you mean by price relatives?

vi) Write the method of calculation Index number

vii) Which Index number is called Ideal Index number?

viii) Write Time Reversal Test and Factor Reversal Test

ix) Compare Laspeyres Index number with paasches Index number

x) Write two utilities of consumer price indices

Marks 5/10

i) Problems on weighted Aggregative method

ii) Problems on price Index number using formulas on a) Laspeyres b) Paasches c) Fishers d) Marshall and Edgeworth

iii) Problems on Average relatives Index number

Unit -V Time series analysis

Marks 1/2

i) What do you mean by a time series?

ii) Write components of time series

iii) What is time series analysis?

iv) What are the objectives of analyzing a time series?

v) Write two use of Time series analysis

vi) Short notes:

a) Trend

b) Seasonal Indices

c) Seasonal Variance

d) Random/Irregular movement

e) Cyclical variance

Marks 5/10

i) Problems on fit straight line trend

ii) Problems on moving average(even/odd years)