Roll No. ....

Total No. of Questions : 07] [Total No. of Pages : 03

BBA (Sem. - 3rd)

BUSINESS STATISTICS

SUBJECT CODE : BB - 304 (2008 to 2011 Batch)

Paper ID : [C0216]

Time : 03 Hours **Maximum Marks : 60**

Instruction to Candidates:

1) Section - A is **Compulsory**.
2) Attempt any **Four** questions from Section - B.

Section - A

Q1) ***(10 × 2 = 20)***

a) Discuss the properties of Correlation Coefficient?

b) Discuss the relationship between Mean, Median and Mode?

c) What are the merits of diagrammatic representation of statistical Data?

d) Differentiate between Geometric Mean and Harmonic Mean?

e) What do you mean by Poisson distribution? Discuss its features?

f) Differentiate between Independent and Dependent variable?

g) Differentiate between Mean deviation and Quartile deviation?

h) What are the uses of Index Numbers?

i) Discuss the Relative frequency Approach to probability?

j) Define Coefficient of Variation?

Section - B

(4 × 10 = 40)

Q2) The following table gives frequency distribution of the weekly wages (in '000 Rs.) of 100 workers in a factory.

Weekly wages (in '000 Rs.)	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	Total
Number of Workers	4	5	12	23	31	10	8	5	2	100

Draw a histogram and frequency polygon of the distribution.

Q3) a) Find the Mean Deviation from the mean for the following data:

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	8	12	10	8	3	2	7

b) Also find the mean deviation about median

c) Compare the results obtained in (a) and (b)

Q4) a) From the following data calculate price index numbers for 2010 with 2000 as a base by

i) Laspeyre's method,

ii) Paasche's method,

iii) Marshall- Edgeworth method, and

iv) Fisher's Ideal method.

Commodities	2000		2010	
	Price	Quantity	Price	Quantity
A	20	8	40	6
B	50	10	60	5
C	40	15	50	15
D	20	20	20	25

b) It is stated that Marshall-Edgeworth index number is a good approximation to Fisher's ideal index number. Verify this for the data in part (a).

Q5) a) What do you understand by probability? Discuss various laws of probability.

b) A brokerage survey reports that 30 percent of individual investors have used a discount broker, i.e. one which does not charge the full commission. In a random sample of 9 individuals, what is the probability that

i) Exactly two of the sampled individuals have used a discount broker?

ii) Not more than three have used a discount broker

iii) At least three of them have used a discount broker

Q6) The following table gives indices of industrial production and number of registered unemployed people (in lakhs). Calculate the value of the correlation coefficient.

Year	1991	1992	1993	1994	1995	1996	1997	1998
Index of Production	100	102	104	107	105	112	103	99
Number Unemployed	15	12	13	11	12	12	19	26

Q7) Discuss briefly the importance of time series analysis in Business and Economics. What are the components of time series? Give an example of each component.

❄ ❄ ❄