Roll No.....

Total No. of Questions: 13] [Total No. of Pages: 03

# **Paper ID [B0102]**

(Please fill this Paper ID in OMR Sheet)

BBA (BB - 102) (S05) (O) (Sem. - 1st)

### BASIC BUSINESS STATISTICS

Time: 03 Hours Maximum Marks: 75

## **Instruction to Candidates:**

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

## **Section - A**

 $Q1) (15 \times 2 = 30)$ 

- a) What is Central tendency?
- b) What do you mean by Arithmetic Mean?
- c) Define Quartile deviation.
- d) What is stratified Random sampling?
- e) What is Quota Sampling?
- f) What is Addition theorem of probability?
- g) Two coins are tossed simultaneously. Find out the probability that both will get heads.
- h) Explain Normal Distribution.
- i) What is Negative Correlation?
- j) What is Regression co-efficient?
- k) Write a note on Paasche Index.
- l) What is analysis of time series?
- m) What is the cost of living index?
- n) Discuss least square method under Time Series Analysis.
- o) Differentiate between cyclical and seasonal fluctuation.

A-10 P.T.O.

#### Section - B

 $(9\times 5=45)$ 

- **Q2)** Explain the utility of statistics as a managerial tool.
- Q3) Discuss meaning, merits & demerits of Mode.
- **Q4)** Define Dispersion. What are the qualities of a good measure of dispersion.
- **Q5)** Write a short note on methods of Random Sampling.
- **Q6)** State & explain Multiplication theorem of probability.
- **Q7)** A fair coin is tossed 3 times. Find out the probability that there will be :
  - (a) Three heads.
  - (b) Two heads.
  - (c) One head.
  - (d) No head.
- **Q8)** In a certain district, an average one house in 1000 has a fire during a year. If there are 2000 houses in that district, what is the probability that exactly 5 houses will have a fire during the year.
- **Q9)** Find out the co-efficient of correlation between X and Y using Karl Pearson's Method.

X: 5 10 15 20 25 30 35 Y: 2 4 7 9 8 10 9

- **Q10)** What is Index Numbers? What are the various problems faced while constructing index numbers.
- Q11) Construct index numbers of price from the following data by using:
  - (a) Laspeyre's Method.
  - (b) Paasche's Method.
  - (c) Fisher's Method.

| Commodity | 1995  |          | 1996  |          |
|-----------|-------|----------|-------|----------|
|           | Price | Quantity | Price | Quantity |
| A         | 2     | 8        | 4     | 6        |
| В         | 5     | 10       | 6     | 5        |
| C         | 4     | 14       | 5     | 10       |
| D         | 2     | 19       | 2     | 15       |

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- Q12) Write a short note on Linear Trend.
- *Q13*) Fit a straight line trend by the method of least squares and predict the sales for 2001.

Year: 1994 1995 1996 1997 1998 1999 Sales: 15 17 20 23 21 24 (in '000 Rs.)

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