

Roll No. 

Total No. of Pages : 03

Total No. of Questions : 07

**BBA (Sem.-3rd)**  
**BUSINESS STATISTICS**  
Subject Code : BB-304  
Paper ID : [C0216]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students has to attempt any FOUR questions.

**SECTION-A**

1. Write briefly :
  - a) Define mean and discuss its relative merits and demerits.
  - b) Distinguish between fixed base and chain base index numbers.
  - c) Explain the mathematical properties of Standard Deviation.
  - d) Briefly explain the advantages of tabulation of data.
  - e) State the properties of Regression analysis.
  - f) State the limitations of Classical Approach to probability.
  - g) What are the requirements of a good average?
  - h) State the advantages of diagrammatic presentation of data.
  - i) Discuss the merits of Moving Averages method.
  - j) Define Independent and Mutually Exclusive Events.

## SECTION B

2. Find the mean, median, and modal ages of married women at first child birth.

Age at the first child Birth	No. of married women
18	37
19	162
20	343
21	390
22	256
23	433
24	161
25	355
26	65
27	85
28	49
29	46
30	40

3. In a survey a person has collected income and expenditure on food of 10 families selected at random. The particulars are as follows :

Income (Rs)	120	90	80	150	130	140	110	95	75	105
Expenditure (Rs)	40	36	40	45	40	44	45	38	50	35

(10)

Find correlation coefficient. Estimate the food expenditure for income of Rs. 125; and predict the income level to meet the food expenditure of Rs.75.

(10)

4. a) What is Dispersion? Discuss briefly various measures of dispersion.

b) Calculate the Standard deviation for the data given below :

Weekly wages (Rs)	No. of Workers
150-180	18
180-210	23
210-240	40
240-270	25
270-300	16
300-330	13
330-360	8
360-390	5
390-420	3

(5,5)

5. Given data :

Items	2009		2010	
	Price	Quantity	Price	Quantity
Rice	4	6	5	6
Oil	30	2	33	2
Tea	8	1	9	1
Washing Powder	60	$\frac{1}{2}$	80	1
Sugar	4	4	5	5
Milk	4	3	6	3

Test the adequacy of index by the Time Reversal Test and the Factor Reversal Test. (10)

6. a) Define probability. Explain various laws of probability.

b) Probability that a man will be alive 25 years hence is 0.3 and the probability that his wife will be alive 25 years hence is 0.4. Find the probability that 25 years hence

i) both will be alive

ii) only the man will be alive

(5,5)

7. What is Time Series? What are its main components? Also discuss the various methods of Time Series analysis. (10)