



CB – 390

22

II Semester B.B.A. Examination, August/September 2023  
(CBCS) (2020 – 21 and Onwards) (Repeaters)

**BUSINESS ADMINISTRATION**

**Paper – 2.5 : Statistical Applications in Business**

Time : 3 Hours

Max. Marks : 70

**Instruction** : Answers should be written **completely** in **English**.

SECTION – A

Answer **any five** questions from this Section. **Each** sub question carries **two** marks.

(5×2=10)

1. a) Define Tabulation.
- b) What is base year ?
- c) Define statistics.
- d) State any two functions of statistics.
- e) If  $Z = 40$  and  $M = 30$  then find  $\bar{X}$ .
- f) Distinguish between classification and tabulation.
- g) State the components of Time Series.



SECTION – B

Answer **any three** questions from this Section. **Each** question carries **five** marks.

(3×5=15)

2. Calculate mode from the following data.

C – I	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
Frequency	10	40	130	60	20

3. Calculate standard deviation from the following.

X	10	20	30	40	50	60	70
f	5	11	19	22	15	06	02

P.T.O.



4. Calculate trend value by the method of Least Squares :

Year	2006	2007	2008	2009	2010
Production in 000 Units	100	120	136	124	118

5. Find the Karl Pearson's coefficient of correlation between sales and advertising Expenditure from the following data.

Sales (Rs. in Lakhs)	100	200	300	400	500	600
Advertising Expenditure in 000's	120	130	140	150	160	170

6. Formulate XY regression line from the following data.

X	40	32	38	42	36	46
Y	30	35	40	36	28	35

### SECTION – C

Answer **any three** questions from this Section. **Each** question carries **twelve** marks.

(3×12=36)

7. Determine the Fisher's ideal index and show how it satisfies the TRT and FRT.

Commodities	2021		2022	
	Price	Quantity	Price	Quantity
A	15	25	25	20
B	20	60	60	35
C	15	60	50	48
D	10	10	20	13
E	30	16	40	16



8. Given below are the figures of demand for a commodity.

<b>Year</b>	2006	2007	2008	2009	2010	2011	2012
<b>Demand (000 units)</b>	73	85	74	75	80	52	58

- a) Fit a straight line by 'Least Squares' method.
- b) Show the actual and trend line on a graph sheet and
- c) Estimate the demand for the year 2013.

9. Compute Quartile deviation and its co-efficient from the following data.

<b>X</b>	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
<b>F</b>	8	15	23	32	28	61	13

10. From the following data calculate Median.

<b>Wages</b>	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
<b>No. of Workers</b>	82	112	150	95	48

11. Following are the results of BBA Examination of a college. Calculate Karl Pearson's co-efficient of correlation between age and success of candidates.

<b>Age in Years</b>	15	16	17	18	19	20
<b>No. of Candidates appears</b>	400	540	680	720	800	600
<b>No. of Candidates passed</b>	300	324	340	360	360	240

SECTION – D

Answer **any one** question of the following. **Each** question carries **nine** marks. (1×9=9)

12. Construct a Price Index number by Imaginary Figure.

OR

List out atleast 10 married couples age and compute correlation co-efficient and regression equations.

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