DCBB213/DCBA213

Reg. No.

II Semester B.B.A. Degree Examination, June/July - 2026

BUSINESS ADMINISTRATION

Statistics for Business Decisions - II

(SEP Scheme F+R)

Paper : 2.3

Time : 3 Hours **Maximum Marks : 80**

Instructions to Candidates : ***All answers should be written in English only.***

SECTION - A

Answer any Five of the following questions. Each question carries Two marks. **(5×2=10)**

1. a) Define statistical quality control.
   b) Define vital statistics
   c) Define secular trend, give an example.
   d) What is Demography?
   e) What do you mean by time series?
   f) What is extrapolation?
   g) What do you mean by fertility rate?
   h) Define correlation.

SECTION - B

Answer any Four of the following questions. Each question carries Five marks. **(4×5=20)**

2. Distinguish between interpolation and extrapolation.
3. What are the various control charts for Attributes?
4. Interpolate the business done in 2015 from the following data :

Year :	2013	2014	2015	2016	2017	2018
Business done : (in Lakhs)	150	235	?	447	525	780

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5. Calculate the trend values by 3 yearly Moving Averages Method.

Year :	2018	2019	2020	2021	2022	2023	2024
Production: **(in '000' tone)**	79	83	90	94	90	95	92

6. Obtain the Regression equation, from the following data, and estimate the value of 'X' when 'Y' = 90

	X	Y
Mean	18	100
Standard deviation	14	20

Co-efficient of correlation = + 0.6

7. Number of Death recorded in various age groups in two Areas, Block 'A' Block 'B' and the population size in each age group are given in the following table.

Age groups (yrs)	**Block 'A' Population (In lakhs)**	**No.of deaths (in thousands)**	**Block 'B' Population (in lakhs)**	**No.of deaths (in thousands)**
0-10	3000	55	7500	300
10-20	4500	30	6000	50
20-30	6000	40	8000	40
30-40	2000	20	3000	60

Find the CDR and ASDR of Block 'A' and Block 'B'.

SECTION - C

Answer any Three of the following questions. Each question carries Fifteen marks. **(3×15=45)**

8. Explain briefly the control charts techniques used in case of variables.

9. Compute Karl Pearson's co-efficient of correlation for the following data.

Supply (quintals)	:	30	31	32	25	24	26	23	22
Price (Rs)	:	11	12	13	14	15	16	17	18

10. Following data relate to year of service in a factory of Seven persons in a specialised field and their monthly Income.

No. of Years of service	11	7	9	5	8	6	10
Income (000) Rs. :	10	5	7	2	6	4	8

Find the two regression equations, and also estimate the Income of a person with 52 years of service.

11. From the following table find the No. of students who have obtained less than 45 marks but not less than 55 marks using 'Newton's method.

Marks less than :	40	50	60	70	80
No.of Students :	31	73	124	159	190

12. Calculate the age specific fertility rate, general fertility rate and total fertility rate from the following Information :

Age groups (yrs)	No.of Women ('000')	No. of Live births
5-9	60	200
10-14	80	800
15-19	30	1,000
20-24	20	600
25-29	60	400
30-34	20	600
35-39	10	700
40-44	80	1,400
45-49	40	1,300
Total	**400**	**7,000**

SECTION - D

Answer the following question. This question carries Five marks. **(1×5=5)**

13. Differentiate between additive and Multiplicative Time Series Models.