Roll.No. | **25UAFGT1A01**

SET I

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.
B.Com. A&F - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - I
25UAFGT1A01 - Business Statistics

Total Duration : 2 Hrs.30 Mins. Total Marks : 60

Section B

Answer any **SIX** questions $(6 \times 5 = 30$ Marks)

1. Define statistics. Explain its importance in business decision-making.
2. Calculate Karl Pearson's coefficient of correlation for the following data.

X	10	12	13	16	17	18	19
Y	30	34	37	40	42	45	49

3. Using Three years moving average the trend and short-term fluctuations.

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Productions in tonnes	21	22	23	25	24	22	25	26	27	26

4. A bag contains 6 red balls and 4 blue balls. Two balls are drawn one after another without replacement. Find the probability that both balls are red.
5. Calculate the standard deviation for the following data:

x	10	20	30	40	50
f	2	3	4	5	6

6. Compute Spearman's Rank Correlation coefficient for the following data:

R1	1	2	3	4	5	6
R2	2	1	4	3	6	5

7. Explain the different methods of measuring trend.
8. A factory has three machines A, B, and C producing 25%, 35%, and 40% of the total output. The percentage of defective items produced is 5%, 4%, and 2% respectively. If an item is selected at random and found defective, what is the probability that it was produced by machine A?

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Section C

Answer any **THREE** questions $(3 \times 10 = 30$ Marks)

9. Estimate Q3 andQ1 for the following frequency table,using an Ogive

C.I	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	6	7	9	10	8	7	3

10. From the following data, compute (i) Arithmetic Mean, (ii) Median, (iii) Mode:

X	10	20	30	40	50
F	3	5	7	4	1

11. The following data gives the values of two variables X and Y:

X	10	12	13	16	17
Y	30	34	37	40	42

    (a) Find the regression equation of X on Y.
    (b) Estimate the value of X when Y $= 38$.

12. A company's sales figures (₹000s) for 6 years are:

Year	2019	2020	2021	2022	2023	2024
Sales	50	55	61	66	68	72

    Fit a straight-line trend using least squares method.

13. Explain Bayes' theorem with a suitable business application.

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