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 - NOV'2024
SEMESTER - I
20UAFAT1001 - Business Statistics

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

Section B

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

1. Compute the geometric mean from the data given below:

Marks	0-10	10-20	20-30	30-40	40-50
No.of students	8	12	18	8	6

2. Describe the importance of classification and tabulation of data in statistical analysis.

3. Mean and standard deviation of 100 items are found to be 40 and 10. if at the time of calculation two items are wrongly taken as 30 and 70 instead of 3 and 27, find the correct standard deviation.

4. Calculate the coefficient of correlation between X and Y series from the following data:

	X Series	**Y series**
No. of observations	15	15
Arithmetic mean	25	18
Standard deviation	5	5

5. Fit straight line trend by the method of least squares and estimate the export for 2024.

Year	2018	2019	2020	2021	2022	2023
Sales (in tonnes)	12	13	14	15	22	26

6. A bag contains 6 white, 4 red and 10 black balls. Two balls are drawn at random. Find the probability that they will both be black.

7. A random sample of size 20 from a normal population gives a sample mean of 52 and a standard deviation of 6. Test the hypothesis that the population mean is 44. Use t test.

8. Explain the addition theorem of probability.

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Section C

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

9. What is sampling? Describe the various methods of sampling used in statistical analysis.

10. Compute the mean, median and mode from the following data:

Class	10-15	15-20	20-25	25-30	30-35	35-40	40-45
Frequency	8	14	18	25	15	14	6

11. Find the correlation between age and playing habits:

Age	15-16	16-17	17-18	18-19	19-20	20-21
No.of Students	200	270	340	360	400	200
Regular players	150	162	170	180	180	120

12. A bag contains 4 white & 6 black balls. Two balls are drawn at random. What is the probability that
    a) both are white
    b) both are black
    c) one white and one black

13. Ascertain the seasonal indices by the ratio to moving average method, from the following data:

Year	**I Quarter**	**II Quarter**	**III Quarter**	**IV Quarter**
2006	68	62	61	63
2007	65	58	66	61
2008	68	63	63	67

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