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 APRIL-2023
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. Briefly explain about collection and tabulation of statistical data.

2. Explain the different methods of measuring trend.

3. Four coins are tossed. Compute the probability of getting 2 heads and 2 tails.

4. A sample of 900 items has mean 3.4 and standard deviation 2.61. Classify the sample be regarded as drawn from a population with mean 3.25 at 5% level of significance.

5. Find the SD of the following set of observations 45,36,40,37,39,42,45,35,40,39.

6. Using three year moving averages determine the trend and short term fluctuations:

Year	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Production ('000 tons):	21	22	23	25	24	22	25	26	27	26

7. A bag contains 4 white and 6 black balls. Two balls are drawn at random. Predict the probability that One White and One Black.

8. In 120 throws of a single die, the following distribution of faces was observed, determine the chi square method.

Face	1	2	3	4	5	6
Frequency	30	25	18	10	22	15

Section C

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

9. Illustrate the different kinds of diagrammatic representation of statistical data.

10. Calculate Karl Pearson's Coefficient of Correlation from the following data using 20 as the working mean for the price and 70 as the working mean for demand.

Price	14	16	17	18	19	20	21	22	23
Demand	84	78	70	75	66	67	62	58	60

Contd...

11. Determine the seasonal indices from the following data using the average method.

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
1974	72	68	80	70
1975	76	70	82	74
1976	74	66	84	80
1977	76	74	84	78
1978	78	74	86	82

12. Five men in a company of 20 are graduates. If 3 men are picked out from this 20 persons at random, compute the probability that (i) All are graduates (ii) Atleast one is a graduate.

13. Two samples of 6 and 5 items respectively gave the following data:

Mean of the first sample	$= 40$
SD of the first sample	$= 8$
Mean of the second sample	$= 50$
SD of the second sample	$= 10$

Is the difference between the means significant? The value of t for 9df at 5%.

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