

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.(Honours) - END SEMESTER EXAMINATIONS NOVEMBER - 2022

SEMESTER - I

20UBHCT1003 - Business Statistics

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section A

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

1. From the following find out the mean profits.

Profits per shops(Rs.)	100-200	200-300	300-400	400-500	500-600	600-700	700-800
Number of shops	10	18	20	26	30	28	18

2. Compute the semi interquartile range and quartile coefficient from the following:

Age in years	20	30	40	50	60	70	80
No of members	3	61	132	153	140	51	3

3. Classify the methods of sampling.
4. In a village 'A' out of random sample of 1,000 persons 100 were found to be vegetarians while in another village 'B' out of 1,500 persons 180 were found to be vegetarians. Do you find a significant difference in the food habits of the people of the two villages.
5. Describe the types of ANOVA.

6. Fit a straight line regression of Y on X from the following data.

X	10	12	13	16	17	20	25
Y	10	22	24	27	29	33	37

7. The following figures relate to the profits of a commercial concern for 8 years.

Year	2008	2009	2010	2011	2012	2013	2014	2015
Profit(Rs.)	15,420	14,470	15,520	21,020	26,120	31,950	35,370	34,670

Find the trend of profits by the method of moving averages.

8. Fit a straight line trend by the method of least squares to the following data:

Year	2010	2011	2012	2013	2014	2015
Production(Tonnes)	24	25	29	26	22	24

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Section B

Part A

Answer any **TWO** questions ($2 \times 10 = 20$ Marks)

9. Calculate Bowley's coefficient of skewness from the following data.

Class Interval	62.5-87.5	87.5-112.5	112.5-137.5	137.5-162.5	162.5-187.5	187.5-212.5	212.5-237.5	237.5-262.5
Frequency	35	40	48	100	125	80	50	22

10. Calculate standard error of mean from the following data, showing the amount paid by 100 firms in Calcutta on the occasion of Durga puja.

Mid value(Rs.)	39	49	59	69	79	89	99
No. of firms	2	3	11	20	32	25	7

11. From the following data calculate rank correlation coefficient after making adjustment for tied ranks.

X	48	33	40	9	16	16	65	24	16	57
Y	13	13	24	6	15	4	20	9	6	19

12. Examine the measurement of secular trend.

Part B

Compulsory question ($1 \times 10 = 10$ Marks)

13. A dice is tossed 120 times with the following results:

Number turned up	1	2	3	4	5	6	Total
Frequency	30	25	18	10	22	25	120

Test the hypothesis that the dice is unbiased.
