

Roll.No.

23UBIAT3003

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. ISM - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - III

23UBIAT3003 - Business Mathematics and Statistics

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

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

1. Let $A = \{1, 2, 3, 4, 5\}$ and $B = \{2, 4, 6, 8, 10\}$ then find (i) $A \cup B$, (ii) $A - B$ and (iii) $B - A$
2. Find the compound interest on Rs.15,625 at 8% per annum for 3 years compounded annually.
3. Explain the various methods of collecting primary data.
4. Calculate the Geometric mean for the following data.

x:	10	20	30	40	50	60
f:	5	18	20	10	6	1

5. Compute the Standard deviation for the following data.

x:	5	10	15	20	25	30
f:	8	15	18	24	22	17

6. Find the mean deviation about mean for the following data.

x:	2	3	4	5	6	7
f:	1	5	8	4	2	1

7. Calculate the rank correlation for the following data.

x:	1	2	3	4	5	6	7	8	9	10	11	12
y:	12	8	6	10	3	5	4	7	8	2	11	1

8. From the following information calculate the two regression equations and the value of x when $y = 38$, Mean value of x is 5, Mean value of y is 22, regression coefficient of x on y is 0.303 and regression coefficient of y on x 2.7.

Contd...

Section C

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

9. Out of the group of 50 teachers in a school 30 teach Mathematics, 20 teach English, 25 teach Science, 10 teach both Mathematics and Science & none teach Mathematics and English.

Find (1) How many teach Science and English
(2) How many teach only English

10. A person purchases a machine on 1st January 2009 and agrees to pay 10 installments each of Rs.12,000 at the end of every year inclusive of compound rate of 15%. Find the present value of the machine.

11. Calculate mean, median and mode for the following data

CI:	25-35	35-45	45-55	55-65	65-75	75-85
f:	39	51	56	78	50	42

12. Find the Quartile deviation for the following data.

CI:	10-20	20-30	30-40	40-50	50-60	60-70	70-80
f:	18	21	26	30	24	20	15

13. Find the two regression lines.

x:	57	58	59	59	60	61	62	64
y:	77	78	75	78	82	82	79	81
