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 -2023
SEMESTER - III
20UBIAT3003 - Business Mathematics and Statistics - I

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

Section B

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

1. Out of a group of 60 students, 25 play Cricket, 30 play Football, 24 play Hockey, 10 play Cricket and Football, 9 play Cricket and Hockey, 12 play Hockey and Football and 5 play all the three. Use Venn-diagram to show how many play only one game.

2. Compute median from the following data:

Mid values	115	125	135	145	155	165	175	185	195
Frequency	6	25	48	72	116	60	38	22	3

3. Compute Mean deviation about Mean for the following data:
   18, 20, 12, 14, 19, 22, 26, 16, 19, 24

4. From the following data, Compute the Rank correlation coefficient.

x	21	36	42	37	25
y	47	40	37	42	43

5. (i) Compute the compound interest for Rs.2,500 for 4 years at 8% per annum.
   (ii) Compute the compound interest in the above case when interest is compounded (a) half yearly and (b) quarterly.

6. Compute Arithmetic mean for the following:

Marks	20-30	30-40	40-50	50-60	60-70	70-80
No. of Students	5	8	12	15	6	4

7. Explain in detail the different measures of Dispersion.

8. State the importance of Regression Analysis.

Section C

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

9. Describe Venn diagram. Explain Complement, Union, Difference and Intersection with Venn diagrams.

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10. A bill for Rs.1,825 was drawn on 22^{nd} January at 6 months date and discounted on 16^{th} April at the rate of 10% per annum. Find the sum form which the bill was discounted and the banker's gain.

11. From the following data find out Mean, Median and Mode.

Interval	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	18	41	90	131	140	54	15

12. Calculate Pearson's coefficient of correlation from the following data using 44 and 26 respectively as the origin of x and y.

x	43	44	46	40	44	42	45	42	38	40	42	57
y	29	31	19	18	19	27	27	29	41	30	26	10

13. For the data given below, compute regression equation of y on x.

x	146	152	158	164	170	176	182
y	75	78	77	79	82	85	86

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