

Roll.No.

25UCOGT1001

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. - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - I

25UCOGT1001 - Business Statistics and Operations Research- I

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

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

1. State the limitation of Statistics.
2. Compute the range and the coefficient of range for the following data.
35, 40, 52, 29, 51, 46, 27, 30, 30, 23
3. A Manufacturer of ball pens claims that a certain pen he manufactures has a mean writing life of 400 pages with a standard deviation of 20 pages. A purchasing agent selects a sample of 100 pens and puts them for test. The mean writing life for the sample was 390 pages. Should the purchasing agent reject the manufactures claim at 5% level?. Table Value of z at 5% level is 1.96 for two tail test and 1.64 approximately for one tail test.
4. Solve the following assignment problem:

	I	II	III
A	8	7	6
B	5	7	8
C	6	8	7

5. Solve the transportation by using North West Corner Rule.

	S ₁	S ₂	S ₃	a _i
W ₁	5	4	3	6
W ₂	4	7	6	8
W ₃	2	5	8	12
W ₄	8	6	7	4
b _j	8	10	12	

6. The following are the ranks obtained by 10 students in statistics and mathematics:

Statistics	1	2	3	4	5	6	7	8	9	10
Mathematics	1	4	2	5	3	9	7	10	6	8

To what to extent is knowledge of students in the two subjects related.

Contd...

7. Explain the characteristics of Business Statistics.
8. Examine the different types of Sampling.

Section C

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

9. Explain the functions of Business Statistics.
10. Calculate the Karl Pearson's co-efficient of correlation for the following data:

X	65	66	67	67	68	69	71	73
Y	67	68	64	68	72	70	69	70

11. Compute the regression of y on x:

x	1	2	3	4	5	8	10
y	9	8	10	12	14	16	15

12. Compute the optimal solution for the assignment problem with the following cost matrix.

Salesman	Area				
		W	X	Y	Z
	A	11	17	8	16
	B	9	7	12	6
	C	13	16	15	12
	D	14	10	12	11

13. Solve the following transportation problem by using VAM method:

	A	B	C	a_i
F₁	10	9	8	8
F₂	10	7	10	7
F₃	11	9	7	9
F₄	12	14	10	4
b_j	10	10	8	
