MBHC-1.4

Sl. No.

I Semester M.B.A. Degree Examination, October/November - 2025

MANAGEMENT

Statistics and Optimization Techniques

(CBCS Scheme)

Time : 3 Hours **Maximum Marks : 80**

SECTION - A

Answer any Five questions. Each question carries 5 marks. **(5×5=25)**

1. Define inferential statistics. Differentiate it with descriptive statistics .

2. Differentiate between arithmetic mean and geometric mean with example.

3. What is skewness? How do you interprete it?

4. What is conditional probability? Give example.

5. What is the scope of operation research?

6. What are the conditions necessary for binomial distribution?

7. What is value of a game? Explain.

SECTION - B

Answer any Four questions. Each question carries 10 marks. **(4×10=40)**

8. Compute Karl Pearson Co-efficient or correlation from the below data

X	14	19	24	21	26	22	15	20	19
Y	31	36	48	37	50	45	33	41	39

9. Calculate mean deviation and standard deviation for the following

X	10	20	30	40	50	60	70	80
Y	15	30	53	75	100	110	115	125

10. Differentiate between correlation and regression.

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11. Use dominance to solve the following problem

	A	B	C	D	E
A	4	4	2	-4	-6
B	8	6	8	-4	0
C	10	2	4	10	12
D	7	4	5	7	6

12. Entrance to MBA programe is determined by CET. The score of this test is normally distributed with a mean of 599 and standard deviation of 100.

a) What percentage of people score more than 600?

b) What percentage of people score between 500 and 600?

c) What percentage of people score less than 500?

13. Discuss the significance and phases of operation research.

SECTION - C

14. Case (Compulsory). **(1×15=15)**

The following table gives the three estimates draw the network of the project and calculate the slack for each event. Find the critical path and probability of completing project in 35 days.

Activity	1-2	1-3	2-5	3-4	4-5	5-8	4-6	4-7	6-9	8-9	7-10	9-10
t_0	3	1	6	8	0	5	6	3	1	3	5	2
t_m	5	2	8	12	0	7	9	6	2	5	14	5
t_p	7	3	12	17	0	9	12	8	3	8	17	6
