MBHC-1.4

Sl.No. : **Total No. of Pages : 2**

First Semester M.B.A. Degree Examination, June/July - 2024
(SLM Scheme) (CBCS)
MANAGEMENT
Statistics and Optimization Techniques

Time : 3 Hours **Max. Marks : 80**

Instruction : ***Answer All the Sections.***

SECTION - A

Answer any five questions. Each question carries five marks. **[5 × 5 = 25]**

Q1) Bring out the significance of measures of central tendency.

Q2) Explain the significance of standard deviation.

Q3) Bring out the need for classification of data.

Q4) Write a note on scope of operations research.

Q5) Calculate the regression equations of X on Y from the data given below :

Price (Rs)	10	12	13	12	16	15
Amount Demanded	40	38	43	45	37	43

Q6) X is a normally distributed variable with mean $\mu = 30$ and standard deviation $\sigma = 4$. Find $P(x < 40)$.

Q7) Describe the different time estimates in project management.

SECTION - B

Answer any four questions. Each question carries ten marks. [4 × 10 = 40]

Q8) Bring out and explain the application of statistics in managerial decision making process.

Q9) Elucidate the phases of operations research.

Q10) A coin is tossed 12 times. What is the probability of getting exactly 7 heads?

Q11) Explain the significance of correlations and regressions in business decisions.

Q12) Solve the payoff matrix. Find strategy for players and value of the game.

	B1	B2	B3	B4
A1	1	7	3	4
A2	5	6	4	5
A3	7	2	0	3

Q13) A small project has 7 activities and the time in days for each activity is given below. Draw the network and find the project completion time.

Activity	Immediate predecessor	Time in days
A	-	6
B	-	8
C	A	3
D	A	4
E	B, D	6
F	B, C, D	10
G	E	3

SECTION - C

Q14) Given the following distribution calculate Mean Median and Mode and also show their empirical relationship. **[1 × 15 = 15]**

Pay Scale (Rs)	No. of employees
Less than 2000	14
Less than 3000	19
Less than 4000	26
Less than 5000	35
5000 and above	42