MBHC-1.4

Sl.No. : **Total No. of Pages : 3**

First Semester M.B.A. Degree Examination, May/June - 2023
(CBCS) (SLM NEW)
MANAGEMENT
STATISTICS AND OPTIMISATION TECHNIQUES

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

Instruction : Attempt all Sections.

SECTION - A

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

1. Write note on limitations of statistics in managerial decision making.
2. Differentiate between correlation and regression.
3. Bring out the significance of central tendencies.
4. Write a note on scope of operations research.
5. Construct degrees of scattering of data points and explain the regression line that is more accurate estimate of the relationship between X and Y.
6. One card is drawn from a deck of 52 cards, Well-shuffled. Calculate the probability that the card will.
   i) be an ace,
   ii) not be an ace
7. What is project cost management? Explain.

SECTION - B

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

8. Describe the different sources of data used in business research and decisions.
9. Bring out and explain different decision making environment.

10. A customer accounts of a department store have an average balance of ₹120 and a standard deviation of ₹40. Assuming that the account balance are normally distributed :

    a) What proportion of account is over ₹120? and

    b) What proportion of account is less than ₹100?

11. Explain the advantages and limitations of operations research.

12. Find the saddle point for the following payoff matrix and state the optimum strategy for players and value of the game.

Players	B1	B2	B3	B4	B5
A1	8	3	9	4	6
A2	5	6	4	1	3
A3	8	7	9	10	7
A4	3	5	2	4	1

13. Draw the network diagram and determine the critical path for the following project :

Activity	Time estimate (Weeks)
1-2	5
1-3	6
1-4	3
2-5	5
3-6	7
3-7	10
4-7	4
5-8	2
6-8	5
7-9	6
8-9	4

SECTION - C

14. Case (Compulsory) **[1×15=15]**

In statistics, We're often interested in understanding how two variables are related to each other. Often denoted as *r*, this number helps us to understand how strong a relationship is between two variables. It's important to note that two variables could have a strong positive correlation or a strong negative correlation. In the light of the above observations: answer the following questions with examples.

a) What is considered to be a weak correlation?

b) What is considered to be a strong correlation?