MBSC-3.1D

Sl.No. :

Total No. of Pages : 2

Third Semester M.B.A. Degree Examination, June - 2025
(SLM Scheme) (CBCS)
MANAGEMENT
Elective - D : Operation
Operation Research and Analytics

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

SECTION - A

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

1. Briefly explain the assumption of LP Model.
2. Briefly explain the transportation algorithm.
3. What do you mean by unbalanced transportation problem.
4. What do you mean by sequencing, explain the terminology used in sequencing?
5. Explain the types of data mining?
6. What do you mean by 'Critical Path'?
7. What do you mean by simulation?

SECTION - B

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

8. Discuss Monte-Carlo simulation method.
9. Discuss the advantages and disadvantages of simulation technique.
10. Explain application of business analytics.
11. Solve the following transportation problem to obtain optimal solution

Demand - b

	1	2	3	4
P_1	30	10	25	20
P_2	15	25	30	10
P_3	20	30	15	20

Supplies: $P_1 = 1500$, $P_2 = 1500$, $P_3 = 1500$.

• Demands: b1 = 1000, b2 = 1200, b3 = 1500, b4 = 1000.

12. Describe the techniques of statistical quality control.

13. Discuss the various techniques of operations research.

SECTION - C

14. Case (Compulsory). **[1 × 15 = 15]**

A firm is considering replacement of a machine, whose cost price is Rs. 12,200. and the scrap value Rs. 200. The running (maintenance and operating) costs are found from experience to be as follows:

year	1	2	3	4	5	6	7	8
Running Cost (Rs)	200	500	800	1200	1800	2500	3200	4000

When should the machine be replaced?

