April-May-2026

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Total No. of Questions : 5]

SEAT No. :

PF-5708

[Total No. of Pages : 3

[6648]-506
F.Y. M.B.A.
DS 506 MJ GC-06: DECISION SCIENCE
(2024 Pattern) (Semester - I)

Time : 2½ Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) *All questions are compulsory.*
2) *Each question carries 10 marks.*
3) *Each question has an internal option.*
4) *Use of simple calculator is allowed.*
5) *Graph paper will not be provided, draw graph on answer paper.*

Q1) Solve any five questions : **[5 × 2 = 10]**

a) Define Transportation Problem.

b) Explain saddle point.

c) Write the key elements of LPP Formulation.

d) Write Two characteristics of Network Analysis.

e) Write the difference of Pure & Mixed strategy.

f) Write the methods of finding feasible solution of Transportation problem.

g) Write the steps of decision making process

h) Explain Hurwicz Alpha (α) criteria

Q2) Solve Any Two Questions : **[2 × 5 = 10]**

a) Write short notes on Decision science & role of Quantitative techniques.

b) Explain Vogel's Approximation Method (VAM).

c) Distinguish between PERT and CPM.

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Q3) a) A company has a team of four salesmen and there are four districts where the company wants to start its business. The following is the profit per day in rupees for each salesman in each district. Find the assignment of salesmen to various districts which will yield maximum profit. **[10]**

Salesmen	District			
	D_1	D_2	D_3	D_4
A	16	10	14	11
B	14	11	15	15
C	15	15	13	12
D	13	12	14	15

OR

b) Solve the following game **[10]**

Player A	Player B	
	B_1	B_2
A_1	3	5
A_2	4	1

Q4) a) Obtain the Initial solution for the following Transportation problem by using

i) Least Cost Method ii) Vogel's Approximation Method **[10]**

	1	2	3	Supply
X	10	3	9	400
Y	12	10	5	300
Z	8	11	12	300
Requirement	200	300	500	

OR

b) A Farmer wants to decide which of the three crops he should plant. The farmer has categorized the amount of rainfall as high medium and low. Estimated profit is given below : **[10]**