

Section-2

Assignment Problem

Ans-2

		Machines		
		M ₁	M ₂	M ₃
Jobs	1	8	7	6
	2	5	7	8
	3	6	8	7

I₁ = Subtract the smallest element from each corresponding element of each row.

		M ₁	M ₂	M ₃
J ₁	1	2	1	0
J ₂	2	0	2	3
J ₃	3	0	2	1

II.

	M_1	M_2	M_3
J_1	2	0	0
J_2	0	1	3
J_3	0	1	1

III. make assignments

	M_1	M_2	M_3
J_1	2	0	0
J_2	0	1	3
J_3	0	1	1

IV. Mark the row which do not have assignment, mark the column which contains crossed zeroes in marked row and the rows which have assignment in marked column.

	M_1	M_2	M_3	
J_1	2	0	0	
J_2	0	1	3	✓
J_3	0	1	1	✓

V. Find the smallest element among unticked elements that in intersected element and subtract from remaining element keeping marked elements remaining same.

	M_1	M_2	M_3
J_1	3	0	0
J_2	0	0	2
J_3	0	0	0

VI. make assignments

	M_1	M_2	M_3
J_1	3	0	0
J_2	0	0	2
J_3	0	0	0

J_1	=	M_3
J_2	=	M_2
J_3	=	M_1