

# Unit 13 - Week 12

## Course outline

How to access the portal?

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Assignment Problem-II

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## Assessment-12

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2019-10-23, 23:59 IST.

1) By using the dual simplex method the optimal solution of the following L. P. P.  
 Min.  $Z = 3x_1 + x_2$   
 subject to  
 $x_1 + x_2 \geq 1$   
 $2x_1 + 3x_2 \geq 2$   
 and  $x_1, x_2 \geq 0$ ,  
 is given by

1 point

- 2
- 1
- 3
- 1

No, the answer is incorrect.  
 Score: 0

Accepted Answers:  
 1

2) The initial basic feasible solution of the following transportation problem, using north – west corner method

1 point

		To				
		I	II	III	IV	Supply
From	A	13	11	15	20	2
	B	17	14	12	13	6
	C	18	18	15	12	7
	Demand	3	3	4	5	

is given by

- $x_{11} = 2, x_{21} = 1, x_{22} = 3, x_{23} = 2, x_{33} = 2, x_{34} = 5$
- $x_{11} = 2, x_{21} = 2, x_{22} = 2, x_{23} = 2, x_{33} = 2, x_{34} = 5$
- $x_{11} = 2, x_{21} = 2, x_{22} = 2, x_{23} = 3, x_{33} = 2, x_{34} = 4$
- $x_{11} = 2, x_{21} = 2, x_{22} = 3, x_{23} = 2, x_{33} = 2, x_{34} = 4$

No, the answer is incorrect.  
 Score: 0

Accepted Answers:  
 $x_{11} = 2, x_{21} = 1, x_{22} = 3, x_{23} = 2, x_{33} = 2, x_{34} = 5$

3) By using Vogel's method, the optimum basic feasible solution of the following transportation problem

1 point

		$D_1$	$D_2$	$D_3$	$D_4$	$a_i \downarrow$
$O_1$		5	3	6	2	19
$O_2$		4	7	9	1	37
$O_3$		3	4	7	5	34
$b_j \rightarrow$		16	18	31	25	

is given by

- $x_{12} = 18, x_{13} = 1, x_{21} = 12, x_{24} = 23, x_{31} = 6, x_{33} = 30$
- $x_{12} = 18, x_{13} = 1, x_{21} = 10, x_{24} = 25, x_{31} = 6, x_{33} = 30$
- $x_{12} = 18, x_{13} = 1, x_{21} = 12, x_{24} = 25, x_{31} = 4, x_{33} = 30$
- $x_{12} = 18, x_{13} = 1, x_{21} = 10, x_{24} = 25, x_{31} = 6, x_{33} = 30$

No, the answer is incorrect.  
 Score: 0

Accepted Answers:  
 $x_{12} = 18, x_{13} = 1, x_{21} = 12, x_{24} = 25, x_{31} = 4, x_{33} = 30$

4)

0 points

A marketing manager has 5 salesmen and sales – districts. Considering the capabilities of the salesmen and the nature of districts, the marketing manager estimates that sales per month (in hundred rupees) for each salesmen in each district would be as follows :

		District				
		A	B	C	D	E
Salesmen	1	32	38	40	28	40
	2	40	24	28	21	36
	3	41	27	33	30	37
	4	22	38	41	36	36
	5	29	33	40	35	39

Then the assignment of salesman to districts that will result in maximum sales are given by

- $1 \rightarrow B, 2 \rightarrow E, 3 \rightarrow A, 4 \rightarrow C, 5 \rightarrow D$
- $1 \rightarrow B, 2 \rightarrow A, 3 \rightarrow E, 4 \rightarrow C, 5 \rightarrow D$
- $1 \rightarrow B, 2 \rightarrow E, 3 \rightarrow A, 4 \rightarrow D, 5 \rightarrow C$
- $1 \rightarrow B, 2 \rightarrow A, 3 \rightarrow E, 4 \rightarrow D, 5 \rightarrow C$

No, the answer is incorrect.  
 Score: 0

Accepted Answers:  
 $1 \rightarrow B, 2 \rightarrow A, 3 \rightarrow E, 4 \rightarrow C, 5 \rightarrow D$

5) The assignment of the following maximization assignment problem

1 point

		A	B
J		1	2
K		2	2
L		2	4
M		4	5

is given by

- $J \rightarrow D, K \rightarrow A, L \rightarrow C, M \rightarrow B$
- $J \rightarrow B, K \rightarrow D, L \rightarrow C, M \rightarrow A$
- $J \rightarrow D, K \rightarrow B, L \rightarrow A, M \rightarrow C$
- $J \rightarrow A, K \rightarrow D, L \rightarrow B, M \rightarrow C$

No, the answer is incorrect.  
 Score: 0

Accepted Answers:  
 $J \rightarrow D, K \rightarrow A, L \rightarrow C, M \rightarrow B$