Optimization Techniques (BCA-C6001)

Attempt all the questions. Each question carries 2 marks. F.
M :- 30.

1. Name :-

_____

2. Roll number :-

_____

3. 1. The maximum number of independent zero elements in a square matrix is ..... the minimum number of lines required to cover all the zeros in the matrix. 2 points

Mark only one oval.

- ◯ Less than
- ◯ Greater than
- ◯ Equal to

4. 2. In a L. P. P, if the standard primal problem is of maximization, all the constraints involve the sign 2 points

Mark only one oval.

- ◯ <
- ◯ >
- ◯ =
- ◯ None of these

5. 3. In a transportation table, an ordered set of how many cells is said to form a loop? 2 points

Mark only one oval.

- 2 Or more
- 3 Or more
- 4 Or more
- 5 Or more

6. 4. In the inequality 4x+3y >24, the points of intersection are 2 points

Mark only one oval.

- (0, 0), (0, 8)
- (0, 0), (0, 6)
- (0, 8), (6, 0)
- None of these

7. 5. Which method is also known as Modi method? 2 points

Mark only one oval.

- N-W corner method
- Lowest cost entry method
- VAM
- All of these

8. 6. If a L. P. P has no feasible region, then we say that the problem has 2 points

Mark only one oval.

- Bounded solution
- Unbounded solution
- No solution
- None of these

9. 7. CPM is (a) probabilistic, (b) deterministic 2 points

Mark only one oval.

- (a)
- (b)
- Both (a) & (b)
- Neither (a) nor (b)

10. 8. The negative variables which are added to the L.H.S of the constraints to convert them into equalities are called 2 points

Mark only one oval.

- Artificial variables
- Slack variables
- Surplus variables
- All of these

11. 9. An activity that must be completed immediately prior to the start of another activity is a successor activity. 2 points

Mark only one oval.

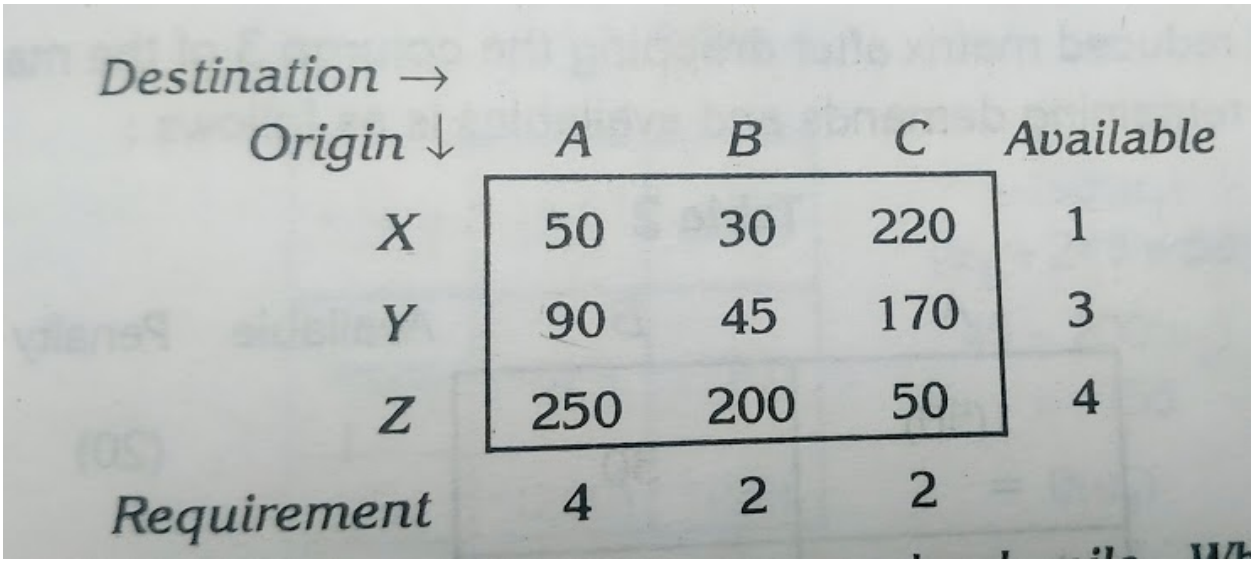
- True
- False

12. 10. The positive variables which are added to the L. H. S of the constraints to convert them into equalities are called 2 points

Mark only one oval.

- Slack variables
- Surplus variables
- Both of the above
- None of the above

13. 11. Select the maximum penalty in the first reduced matrix of the given transportation problem. 2 points

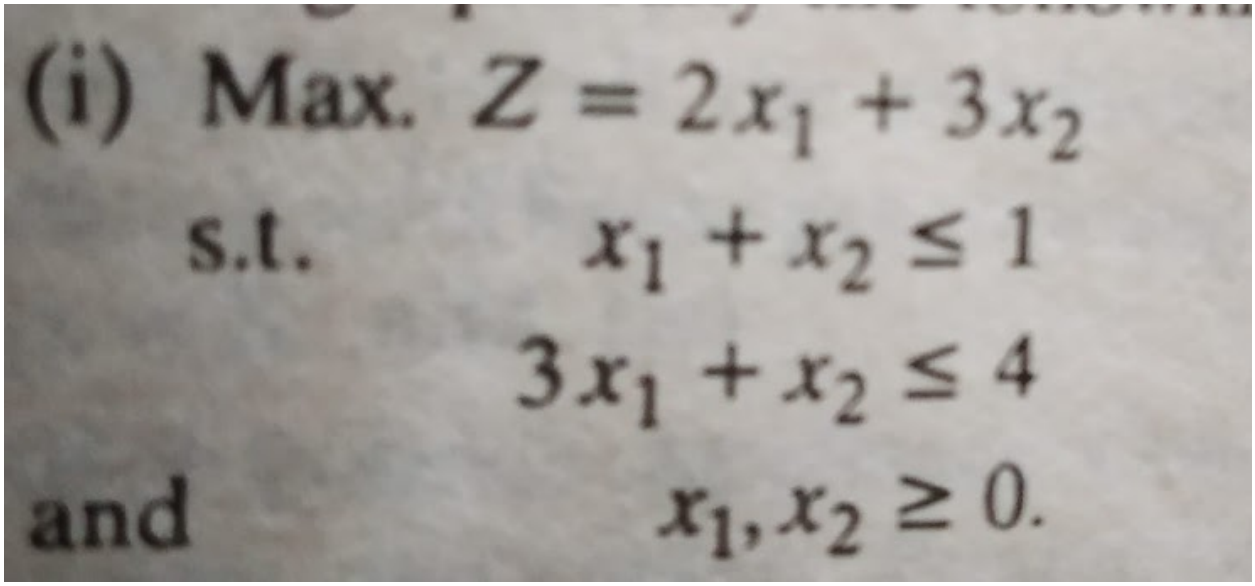


Destination → / Origin ↓	A	B	C	Available
X	50	30	220	1
Y	90	45	170	3
Z	250	200	50	4
Requirement	4	2	2	

Mark only one oval.

- 120
- 150
- 160
- 90

14. 12. Consider the L. P. P 2 points



Mark only one oval.

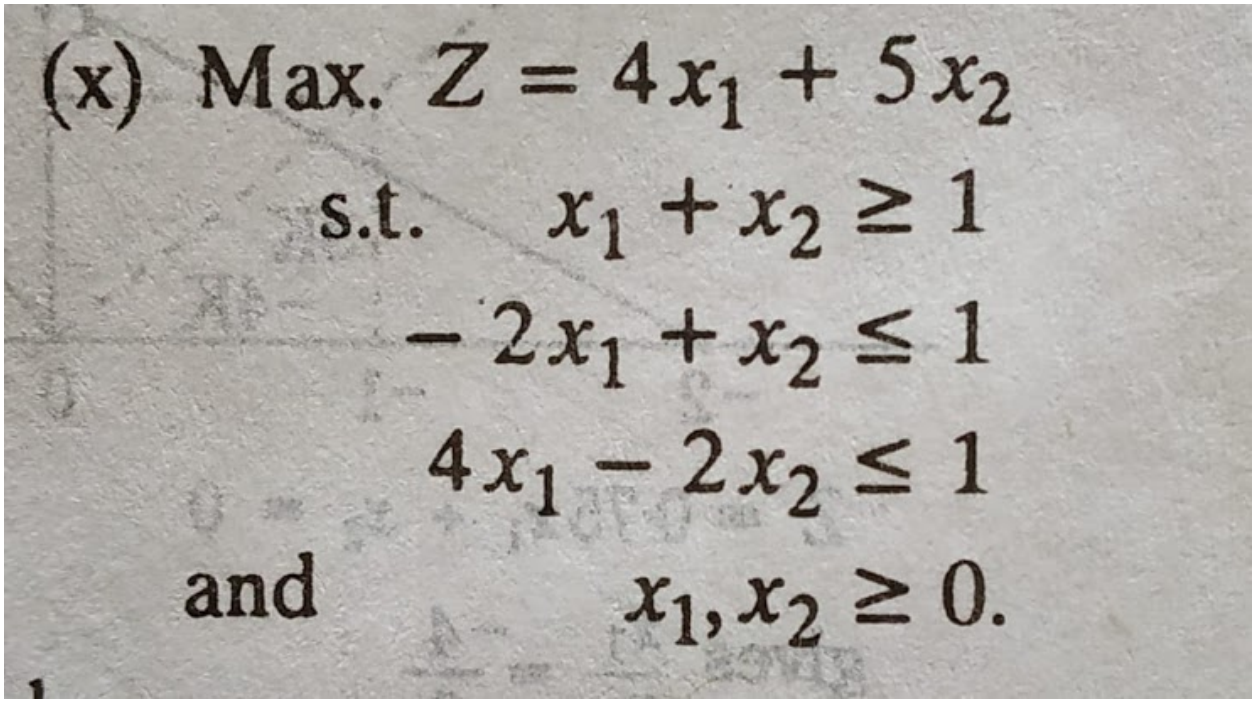
- The L. P. P has no feasible solution
- The L. P. P is unbounded
- The optimal value of L. P. P is 3.
- None of these.

15. 13. The objective of an assignment problem is to assign a number of jobs to an unequal number of persons. 2 points

Mark only one oval.

- True
- False

16. 14. Consider the L. P. P 2 points



Mark only one oval.

- The L. P. P is unbounded.
- The L. P. P is bounded.
- The L. P. P has an optimal solution.
- None of these.

17. 15. A zero is said to be an independent zero if an assignment at this place ..... the zeros at other places. 2 points

Mark only one oval.

- affect
- does not affect