Assignment 6

This date is for submitting the assignment has passed. As per our records, you have not submitted this assignment.

1. In sensitivity analysis, we study the effect of increase and decrease of certain variables on the objective function. The significance becomes more important when imposing for example supply-demand restrictions:

   - True
   - False

No, the answer is incorrect.
Score: 0
Accepted Answers: True

2. Search for a simplex begins at an ___ of the feasible region:
   - extreme point
   - basic feasible solution
   - solution
   - none of the above

No, the answer is incorrect.
Score: 0
Accepted Answers: Both of the above

3. Degeneracy happens in LP whenever more constraints are active than the ___ number needed to define a point:
   - minimum
   - maximum
   - any of the above
   - none of the above

No, the answer is incorrect.
Score: 0
Accepted Answers: minimum

4. We know that basic solution require non-negativity constraints to be active for the con-basis, but when non-negatives also happen there are alternative choices for the basis set:
   - True
   - False

No, the answer is incorrect.
Score: 0
Accepted Answers: True

5. In the standard format of simplex method for matrix A of size m x n the number of maximum bases is ___:

   - True
   - False

No, the answer is incorrect.
Score: 0
Accepted Answers: False

6. If in a maximization problem the constraints have only equality conditions then:
   - adding a slack variable is not logical
   - adding a surplus variable is logical
   - both of the above
   - none of the above

No, the answer is incorrect.
Score: 0
Accepted Answers: Both of the above

7. With no surplus or slack variables we may not get a corresponding matrix with unit values hence we introduce basic starting solution through:

   - artificial variables
   - slack or surplus variables
   - non-basic variables
   - any of the above

No, the answer is incorrect.
Score: 0
Accepted Answers: all of the above

8. To prevent an artificial variable from becoming part of an optimal solution to the original problem, a very large “penalty” is introduced into the objective function. This penalty is created by choosing a positive constant M so large that the artificial variable is forced to be 0 in any final optimal solution of the original problem:

   - True
   - False

No, the answer is incorrect.
Score: 0
Accepted Answers: True

9. A deterministic LP problem has a feasible region that is empty:

   - True
   - False

No, the answer is incorrect.
Score: 0
Accepted Answers: False

10. In a transportation problem, we must make the number of ___ and ___ equal:

    - destinations, sources
    - units supplied, units demanded
    - positive cost coefficients, negative cost coefficients
    - warmhouse, suppliers

No, the answer is incorrect.
Score: 0
Accepted Answers: units supplied, units demanded