Assignment 2

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

1. If during an iteration of the Simplex method the minimum ratio test fails then the LPP has:
   - No solution
   - Multiplie solutions
   - Unique solution
   - Unbounded solution
   No, the answer is incorrect.
   Score: 0
   Accepted Answer: Unbounded solution

2. If during the last iteration of the Simplex method the entry corresponding to the non-basic variable in the deviations row is zero, the LPP has:
   - No solution
   - Multiplie solutions
   - Unique solution
   - Unbounded solution
   No, the answer is incorrect.
   Score: 0
   Accepted Answer: No solution

3. If the optimality has been achieved but the artificial variable is still in the basis then the LPP has:
   - No solution
   - Multiplie solutions
   - Unique solution
   - Unbounded solution
   No, the answer is incorrect.
   Score: 0
   Accepted Answer: No solution

4. Artificial variables are added in a constraint when:
   - A ready feasible solution is available.
   - A ready feasible solution is not available.
   - A ready feasible basic feasible solution is available.
   No, the answer is incorrect.
   Score: 0
   Accepted Answer: A ready feasible basic feasible solution is not available.

5. For a maximizing LPP, during the Simplex procedure, the criteria for a variable to enter into the basis is:
   - Minimum ratio test
   - Maximum ratio test
   - Maximum deviation entry
   No, the answer is incorrect.
   Score: 0
   Accepted Answer: Maximum deviation entry

6. For a maximizing LPP, during the Simplex procedure, the criteria for a variable to leave the basis is:
   - Minimum ratio test
   - Maximum ratio test
   - Maximum deviation entry
   No, the answer is incorrect.
   Score: 0
   Accepted Answer: Minimum ratio test

7. In the Two-Phase Method the objective of the first Phase is:
   - Maximize the sum of the artificial variables.
   - Minimize the sum of the basic variables.
   No, the answer is incorrect.
   Score: 0
   Accepted Answer: Minimize the sum of the basic variables.

8. In the Two-Phase Method the objective of the second Phase is:
   - Use the basis obtained, after the completion of the Phase I, as a starting basis for Phase II
   - Use the basis obtained, after the completion of the Phase I, as a starting basis for Phase II
   No, the answer is incorrect.
   Score: 0
   Accepted Answer: Use the basis obtained, after the completion of the Phase I, as a starting basis for Phase II

9. The difference between the Big M Method and Two Phase methods are:
   - The row entries corresponding to the constraints in various iterations indexes are same.
   - The b.f.s. at each iteration is the same.
   - The solution obtained by the methods is same.
   No, the answer is incorrect.
   Score: 0
   Accepted Answer: Entries in the top row, corresponding to the co-efficients of the objective function, are not same.

10. Use the Big M Method to solve the following LPP:
    Min $-3x_1 + 2x_2 + 2x_3 - 2x_4 - x_5$
    s.t. $2x_1 + 3x_2 + x_3 - x_4 = 10$
    $x_3 - x_4 = 1$
    $3x_2 + 2x_3 - x_4 = 3$
    $x_1, x_2, x_3, x_4, x_5 \geq 0$
    No, the answer is incorrect.
    Score: 0
    Accepted Answer: $x_1, x_2, x_3, x_4, x_5 \geq 0$