1. **True or false: If all the coefficients , , …, in the objective function *P = + + … +* are nonpositive, then the only solution of the problem is = = … = and *P = 0.***
2. **True or false: The pivot column of a simplex tableau identifies the variable whose value is to be decreased in order to increase the value of the objective function (or at least keep it unchanged).**
3. **True or false: The ratio associated with the pivot row tells us by how much the variable associated with the pivot column can be increased while the corresponding point still lies in the feasible set.**
4. **True or false: At any iteration of the simplex procedure, if it is not possible to compute the ratios or the ratios are negative, then one can conclude that the linear programming problem has no solution.**
5. **True or false: If the last row to the left of the vertical line of the final simplex tableau has a zero in a column that is not a unit column, then the linear programming problem has infinitely many solutions.**
6. **True or false: Suppose you are given a linear programming problem satisfying the conditions-**
   * **The objective function is to be minimized.**
   * **All the variables involved are nonnegative, and**
   * **Each linear constraint may be written so that the expression involving the variables is greater than or equal to a negative constant.**

**Then the problem can be solved using the simplex method to maximize the objective function *P = -C.***

1. **True or false: The objective function of the primal problem can attain an optimal value that is different from the optimal value attained by the dual problem.**