

Q1 :

The number of basic feasible solutions for the feasible region determined by the set of equations

$$2x + 3y - 7w + z = 9$$

$$x + 6y + 2z - w = 12$$

is

Correct Answer : Option 3 (5 BFS)

Q2 :

The number of iterations taken by simplex method to determine optimal solution to

$$\max 6x + 5y$$

$$\text{s.t. } 4x + y \leq 8$$

$$10x + y \leq 10$$

$$x, y \geq 0$$

are :

Correct Answer : Option 3 (3 iterations)

Q3 :

The number of basic feasible solutions to the feasible region determined by the equations

$$2x + 6y + 2z + w = 3$$

$$6x + 4y + 4z + 6w = 2$$

$$x, y, z, w \geq 0$$

are :

Correct Answer : Option 2 (1 BFS)

Q4 :

For the LPP given by the equations

$$\begin{aligned} \max \quad & 4x + 10y \\ \text{s.t.} \quad & 2x + y \leq 50 \\ & 2x + 5y \leq 100 \\ & 2x + 3y \leq 90 \\ & x, y \geq 0 \end{aligned}$$

The LPP

Correct Answer : Option 4 (has infinitely many optimal solutions)

Q5 :

The LPP represented as

$$\begin{aligned} \max \quad & 2x + 3y \\ \text{s.t.} \quad & x + 2y \leq 2 \\ & y - x \geq 1 \\ & x + 2y \leq 2 \\ & x, y \geq 0 \end{aligned}$$

has.

Correct Answer : Option 2 (constant value throughout the feasible region)

Q6 :

For the two statements A and B given as

- (A) If feasible region for an LPP is bounded, then the LPP has an optimal solution
- (B) If an LPP has more than one optimal solution, then it has infinitely many optimal solutions

Correct Answer : Option 1 (Both A and B are correct)