

**TEST N°05:**

Convert the following LPM to its dual form

$$\text{Maximize: } Z=2x_1+3x_2+5x_3$$

subject to:

$$\left\{ \begin{array}{ll} x_1+2x_2+3x_3 \leq 10 & \text{(Constraint 1)} \\ 2x_1-x_2+x_3 \geq 8 & \text{(Constraint 2)} \\ x_1+x_2-x_3 \leq 5 & \text{(Constraint 3)} \\ -x_1+3x_2+2x_3 \geq 12 & \text{(Constraint 4)} \end{array} \right.$$

$$x_1 \geq 0, x_2 \geq 0, x_3 \geq 0$$