Q ① Use the revised Simplex method to solve the following LP problem.

i) Maximize $Z = 2x_1 + x_2$

s.t $3x_1 + 4x_2 \leq 6$

$6x_1 + x_2 \leq 3$ and $x_1, x_2 \geq 0$.

ii) Maximize $Z = x_1 + x_2$

s.t $3x_1 + 2x_2 \leq 6$

$x_1 + 4x_2 \leq 4$ and $x_1, x_2 \geq 0$.

iii) Minimize $Z = 4x_1 + 3x_2$

s.t $x_1 + 2x_2 \geq 8$

$3x_1 + 2x_2 \geq 12$ and $x_1, x_2 \geq 0$.

iv) Maximize $Z = 2x_1 - 3x_2$

s.t $x_1 - x_2 \leq 2$

$5x_1 + 4x_2 \leq 46$

$7x_1 + 2x_2 \geq 32$ and $x_1, x_2 \geq 0$.