OPTIMIZATION

1. The objective function $Z = ax + by$ of an LPP has maximum value 42 at(4,6)and minimum value 19 at(3,2).Which of the following is true?

   (a) $a = 9, b = 1$

   (b) $a = 5, b = 2$

   (c) $a = 3, b = 5$

   (d) $a = 5, b = 3$

2. The corner points of the feasible region of a linear programming problem are(0,4),(8,0)and$(\frac{20}{3}, \frac{4}{3})$.If $Z = 30x + 24y$ is the objective function,then(maximum value of Z - minimum value of Z) is equal to

   (a) 40

   (b) 96

   (c) 120

   (d) 136

3. Solve the following linear programming problem graphically:
   Maximize : $Z = x + 2y$
   subject to constraints : $x = 2y \geq 100$,
   $2x - y \leq 0$,
   $2x + y \leq 200$,
   $x \geq 0, y \geq 0$.