

Consider the following constrained minimization problem.

$$\text{Min } f = x^2 + y^2 - 2x$$

with respect to $x(1)$ and $x(2)$

subject to

$$h = y - 2x^2 + 5x = 0$$

$$g = -3x - y + 6 \leq 0$$

(i) Mark the feasible region;

(ii) Mark the optimum point P1 when both h and g constraints are considered;

(iii) Mark the optimum point P2 if only h is considered;

(iv) Mark the optimum point when both constraints are not considered.

