



$$F_x = -\frac{dU}{dx} = -(\text{slope of } U \text{ vs. } x)$$

$$\underline{x=5 \text{ cm}}: \text{ slope} = \frac{0-10}{0.1-0} = -100$$

$$\therefore \underline{F_x = 100 \text{ N}}$$

$$\underline{x=15 \text{ cm}}: \text{ slope} = 0$$

$$\therefore \underline{F_x = 0}$$

$$\underline{x=25 \text{ cm}}: \text{ slope} = \frac{10-0}{0.4-0.2} = 50$$

$$\therefore \underline{F_x = -50 \text{ N}}$$

$$\underline{x=30 \text{ cm}}: \text{ slope} = 50 \text{ also}$$

$$\therefore \underline{F_x = -50 \text{ N}}$$

