

Answer: _____

- (ii) The marginal revenue $MR(x)$ will be
- (a) $200 - 10x^2$
 - (b) $200 - 5x$
 - (c) $200 - 10x$
 - (d) $-5x^2$

Answer: _____

- (iii) The value of x for which revenue increases, will be
- (a) $x < 20$
 - (b) $x > 20$
 - (c) $x = 20$
 - (d) $x = 200$

Answer: _____

- (iv) The slope of the marginal revenue will be:
- (a) -45
 - (b) 45
 - (c) 10
 - (d) -10

Answer: _____

Answer

1 (i)	$p = 16 - 0.004x$	1 (ii)	$R(x) = 16x - 0.004x^2$
2 (i)	$MC = \frac{dc}{dx} = x^2 + 2x - 8$	2 (ii)	$AC = \frac{C(x)}{x} = \frac{1}{3}x^2 + x - 8 + \frac{5}{x}$
2 (iii)	$\text{slope of } AC = \frac{d(AC)}{dx} = \frac{2x}{3} + 1 - \frac{5}{x^2}$	3.	The profit is maximum for $x = 11$ units.
4.	5, 9 units	5.	15, 8 units
6 (i)	$C(x) = 2x^2 - 11x + 50, MC = 4x - 11$	6 (ii)	$0 < x < 5$
7.	400 items	8 (i)	$C = x^2 + 5x + 36, MC = 2x + 5$
8 (ii)	$x > 6$	9 (i)	$x^2 + 6x - 7$
9 (ii)	$\frac{x^2}{3} + 3x - 7 + \frac{16}{x}$	11 (i)	$C(x) = ₹ (2x + 24,000)$