

When only carrier is transmitted antenna current observed is 8A. When it is modulated with 500 Hz sine wave antenna current becomes 9.6A. Find % modulation.

(a) 80%

(b) 20%

(c) 94.26%

(d) 83.76%.

$$(c) m_a = \sqrt{2 \left(\frac{I_{\text{Total}}}{I_{\text{Carrier}}} \right)^2 - 1} = \sqrt{[(1.20)^2 - 1]2}$$

$$= .9426 = 94.26\%$$