FAQs

1. Write the expression for critical depth of neutral axis.

   $$\sigma_{cbc} / \sigma_{st}/m = x_c / d-x_c$$

2. Write the expression for actual depth of neutral axis

   $$bx.x/2 = mA_{st}(d-x)$$

3. Give the expression for moment of resistance for under reinforced rectangular section

   $$M = T \times z = A_{st}\sigma_{st}(d-x/3)$$

4. Give the expression for moment of resistance for over reinforced rectangular section

   $$M = C \times z = bx\ \sigma_{cbc}/2\ (d-x/3)$$

5. Moment of resistance of singly reinforced rectangular beam

   To find x_c

   $$\sigma_{cbc} / \sigma_{st}/m = x_c / d-x_c$$

   To find x

   $$bx.x/2 = mA_{st}(d-x)$$

   If $x < x_c$; it is under reinforced section

   $$M_r = T \times z = A_{st}\sigma_{st}(d-x/3)$$

   If $x > x_c$; it is over reinforced section

   $$M_r = C \times z = bx\ \sigma_{cbc}/2\ (d-x/3)$$