FAQs

1. Write the expression to find the total compressive force offered by the concrete

$$C_u = 0.36 f_{ck} x_{u,lim} b + A_{sc} (f_{sc} - f_{cc})$$

2. Write the expression to find the total tensile force offered by the steel

$$T_u = 0.87 f_y A_{st}$$

3. Give the equation to find the depth of neutral axis

$$C_u + C_{u1} = T_u$$

$$0.36 f_{ck} x_{u,lim} b + A_{sc} (f_{sc} - f_{cc}) = 0.87 f_y A_{st}$$

4. Ultimate moment of resistance (M_u) of singly reinforced rectangular section

$$M_U = 0.36 f_{ck} x_{u,lim} b (d - 0.416 x_{u,lim}) + A_{sc} (f_{sc} - f_{cc}) (d - d')$$

$$M_u = 0.87 f_y A_{st1} (d - 0.416 x_{u,lim}) + 0.87 f_y A_{st2} (d - d')$$