Glossary

f_{ck} = Characteristic compressive strength of concrete in N/mm^2

f_y = Characteristic tensile strength of steel in N/mm^2

Y_m = partial safety factor

E_s = modulus of elasticity of steel

Partial safety factor for Concrete γ_m : 1.5

Partial safety factor for steel γ_m : 1.15

C_{u1} = total compressive force offered by the concrete

C_{u2} = total compressive force offered by the compression reinforcement at top

T_u = total tensile force offered by the steel

A_{st1} = Area of tensile steel for a balanced singly reinforced section

A_{st1} = Additional area of tensile steel

A_{sc} = Area of compression reinforcement

f_{sc} = stress in compressive steel at d^1 from the top

f_{cc} = stress in concrete at d^1 from top

x_u = actual depth of neutral axis

$x_{u,lim}$ = limiting value of depth of neutral axis

d^1 = Effective cover to compression reinforcement

M_u = ultimate moment of resistance

$M_{u,lim}$ = limiting value of ultimate moment of resistance

Characteristic strength of materials: Characteristic strength of materials is the strength of materials below which not more than 5% test results are expected to fall.