Nombre del Alumno: Joaquin Betony Zapete Morales.

Nombre del tema: Momentos.

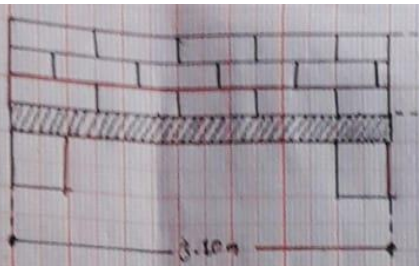
Parcial: Unida II

Nombre de la Materia: análisis de materiales.

Nombre del profesor: ARQ. Pedro Alberto García López.

Nombre de la Licenciatura: Arquitectura.

Cuatrimestre: Numero 4



Plataforma.

Concreto reforsado

Muro de block = 270 Kg/m

$h = \frac{L}{12} = \frac{3.20m}{12} = 0.2666\ m$

b: 0.15(h) → 0.25 (0.5) = 0.12 m

P.P.T.: 0.25 m x 0.15 m x 2400 Kg/m³
: 90 Kg/m

P.P.M. : 5.70 m (270 Kg/m) : 1539 Kg/m

1539 Kg/m + 90 Kg/m = 1.629 Kg/m
1.629 T/m

$M = \frac{1}{8} qL^2 = \frac{1629 (3.20)^2}{8}$

M = 2.085 T.m

$RA = RB = \frac{q \cdot L}{2}$

RA = RB = 1629 Kg/m (3.20m)

RA = RB = 2.606 Ton

$OA = OB = \frac{qL^3}{24E}$

$\frac{1}{I} \times \frac{10.15 (0.23)^3}{2} = 0.0001953$

$\theta A = \theta B = \frac{1629\ T/m\ (3.20)^3}{24\ (3100000)\ (0.0001953\ m^4)}$

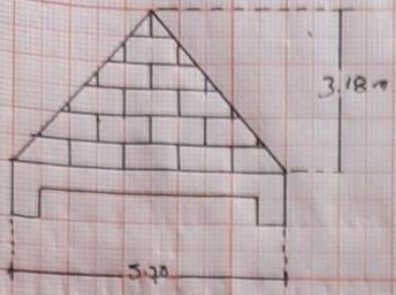
OA = ØB 0.003676

$f = \frac{5}{384} \cdot \frac{qL^4}{EI}$

$F = \frac{5}{384} \cdot \frac{1629\ T/m\ (320)^4}{(3100000)\ (0.0001953\ m^4)} = 0.00367339$

Joaquin Betony Zapeta Morales.

Plataforma



Concreto Reforsado

Muro de block: 270 Kg/m

$h \frac{L}{12} = \frac{5.70m}{12} = 0.475m$

$b = 0.5(h) : 0.50(0.5) = 0.25m$

P.P.T. $0.50 \times 0.25 \cdot 2400$

300 Kg/m

P.P.A. $3.18m(270) = 858.6$

$858.6 + 300 = 1158$ t.m

$I_x = \frac{0.25(0.50)^3}{12}$

$I_x = 0.002604 m^4$

$M = \frac{9L^2}{12} = \frac{1158(3.70)^2}{12}$

$M = 17.871$ ton.m

$RA : RB \quad \frac{9L}{4} \quad \frac{1158 t/m (5.70m)}{4}$

$RA : RB : 1.650$ ton

$\theta A : \theta B : \frac{5qL^3}{196 EI}$

$\downarrow$

$\frac{1158 t/m (5.70)^4}{196(3100000)(0.002604 m^4)} = 0.001261 m$

$F \frac{9L^4}{120 EI} \longrightarrow \frac{1158 t/m (5.70)^4}{120(3100000)(0.002604 m^4)} = 0.001261 m$

Joaquin Belony Zapete