

**Mi Universidad**

## **ANALISIS DE ESTRUCTURAS**

*Nombre del estudiante: Carlos Jesus Ordoñez Castro*

*Nombre del tema: CALCULO ESTRUCTURAL*

*Parcial: 2*

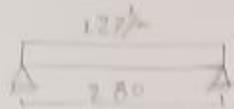
*Nombre de la Materia: Analisis de estructuras*

*Nombre del profesor: PERLA MARISOL BARAJAS PEREZ*

*Nombre de la licenciatura: arquitectura*

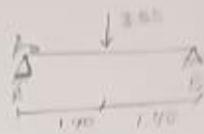
*Cuatrimestre: 5*

El. 0  
2M.0



$$R_{w(u)} = 127(280) = 355$$

$$UR \ l/2 = 2.80/2 = 1.40$$



CM.0

$$3.65(1.40) + RB(2.80) = 0$$

$$-4.97 + RB(2.80) = 0$$

$$R = B = \frac{4.97}{2.80} = 1.77 \text{ ton}$$

$$\sum F_x = RA - 3.65 = 1.77$$

$$\sum F_x = RA - 1.78 \text{ ton} = 0 \Rightarrow RA = 1.78 \text{ ton}$$

$$R = (1.9 + 1) \cdot f''c$$

$$q^2 = \frac{Mu}{F_c \cdot b \cdot d^2 \cdot f''c} \cdot x^2 + 1 \rightarrow q = \sqrt{\frac{Mu}{F_c \cdot b \cdot d^2 \cdot f''c} \cdot x^2 + 1}$$

$$q = \sqrt{\frac{161,200}{(0.90)(0.15)(0.16)^2(136 \text{ kg/cm}^2)}} \cdot x^2 + 1$$

$$\frac{(0.90)(0.15)(0.0256)(136)}{(0.90)(0.15)(0.0256)(136)} = 0.470016$$

$$\sqrt{\frac{161,200}{0.470016} \cdot x^2 + 1}$$

$$\sqrt{342967.0479} = 585.633 \cdot x^2 + 1 = 1174.266$$

$$6 = 234.375 \quad 0.00545 \quad 1.723$$

$$93557.748$$

$$M_u = \frac{Wl^2}{8}$$

Mu o la suma del momento  
mas su factor de  
seguridad

$$F_{s \text{ max}} = 1.38 \cdot 10^8$$

$$f''c = 136 \text{ kg/cm}^2$$

$$Mu = 1.29(130000) = 161200$$

$$U.F.R. = 0.90$$

$$M.F.R. = 0.80$$

$$\sqrt{-342967.0479}$$

$$(0.135)(3.4816)$$

$$0.470016$$

$$\sqrt{161,200}$$

$$-342967.0479 \cdot x^2 + 1$$

$$-68593.0959$$