

淡江大學 98 學年度轉學生招生考試試題

系別：土木工程學系三年級

科目：工程力學(含靜力學、材料力學)

准帶項目請打「V」	
V	計算機

本試題共 四 大題， 1 頁

(1) Draw the shear force and bending moment diagram for the beam shown in Fig.1
25%

(2) The beam shown in Fig.1 is built with section shown in Fig.2. Find :

(a) The maximum normal stress in the web.(樑腹)

(b) The maximum shear stress in the web.

Given : $t_w = t_f = 0.5$ inch; $a = 4$. inch; $b = 3.5$ inch

25%

(3) An element is subjected to stresses shown in Fig.3. Determine the principal stresses and shown them on a properly oriented element.

Given :

$$\tau_{xy} = 4. \text{ ksi}; \quad \sigma_x = 12 \text{ ksi}; \quad \sigma_y = 4 \text{ ksi}$$

25%

(4) Calculate the axial force of member BH, CH and BC of the truss shown in Fig.4.

25%

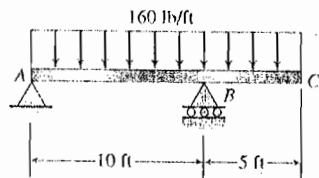


Fig.1

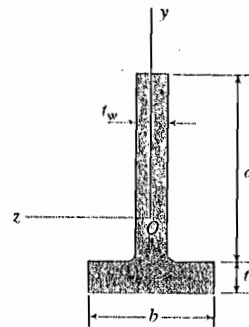


Fig.2

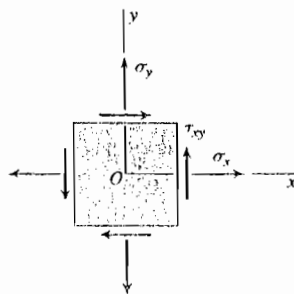


Fig.3

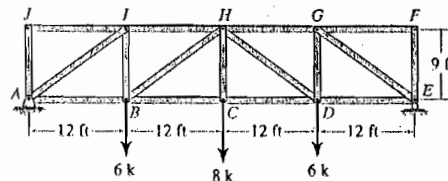


Fig.4