淡江大學96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)

可否使用計算機			
可	○	否	

本試題共 壹 頁

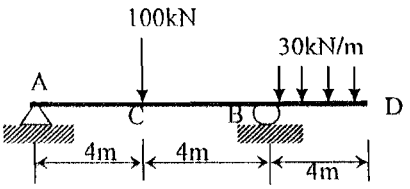

Fig. 1

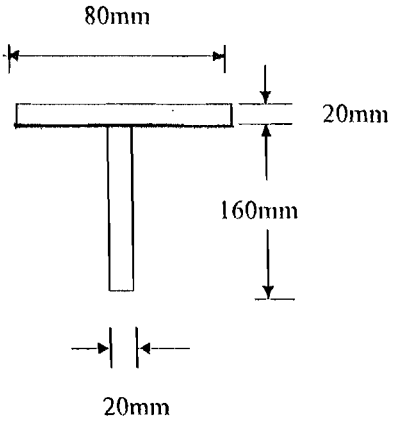

Fig. 2

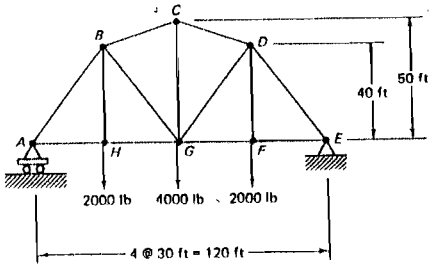

Fig. 3

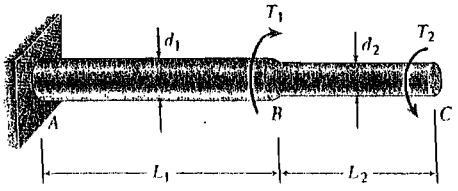

Fig. 4

[1]. Draw the shear-force and bending-moment diagrams for the beam shown in Fig. 1 . 25 %

[2]. The beam shown in Fig. 1 is built with section shown in Fig. 2. Determine :

(a) The maximum shear stress in the web.

(b) The minimum shear stress in the web

(c) The maximum normal stress in the section

(d) The minimum normal stress in the section. 25 %

[3]. Analyze the truss shown in Fig. 3 with the section method. Determine the axial force in member BG and CG . 25 %

[4]. The shaft shown in Fig. 4. Given :

T1 = 3 k-ft, T2 = 2 k-ft, d1 = 3 inch, d2 = 2 inch,

L1 = 2 ft, L2 = 1.5 ft, G = 12000 ksi.

Calculate the torsional angle (in degree) at point C. 25 %