淡江大學99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)

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

2. Determine the force in members HC and HG of the truss shown in Fig.2. (P = 5 kN)   25%

3. A cantilever beam has a cross section of channel shape is supported and loaded as shown in Fig. 3. (q = 3 kN/m, L = 4 m)   30%

   Determine:
   (a) The maximum tensile stress in the beam
   (b) The maximum compressive stress in the beam
   (c) The maximum shear stress in the web

4. Explanations: 20%
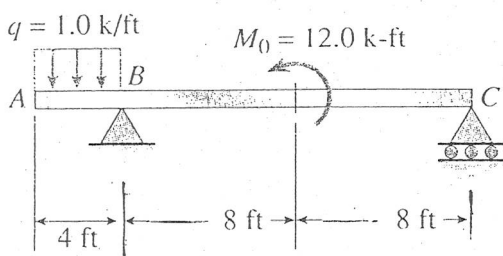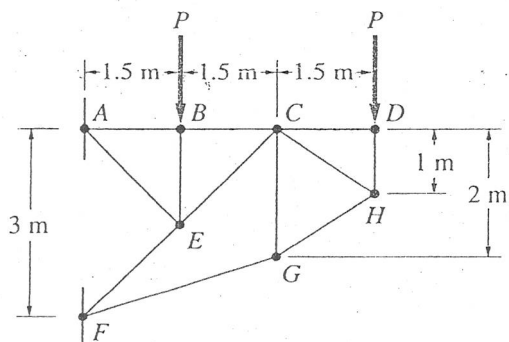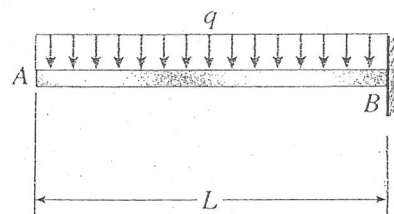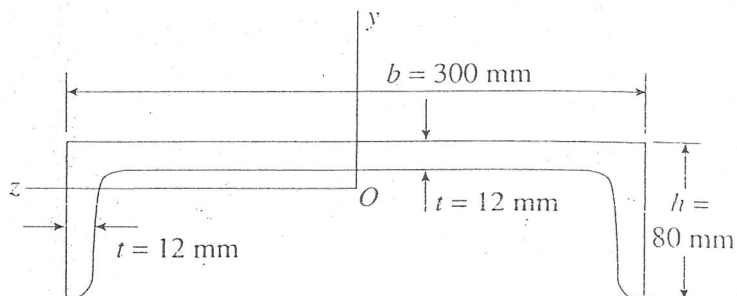   (a) Linear elasticity, (b) Poisson's ratio, (c) Plane strain, (d) Frame

Fig. 1

Fig. 2

Fig. 3