

系別：土木工程學系

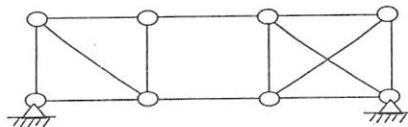
科目：結 構 學

准帶項目請打「V」	
	計算機

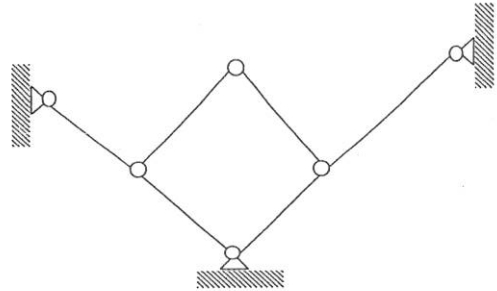
本試題共 2 頁，5 大題

I) Classify each of the structures as statically determinate, statically indeterminate or unstable. If indeterminate, specify the degree of indeterminacy. (15%)

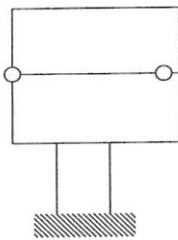
1)



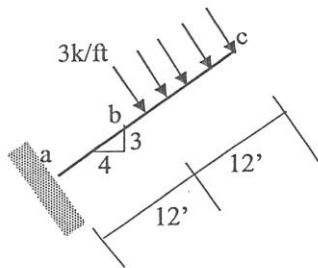
2)



3)

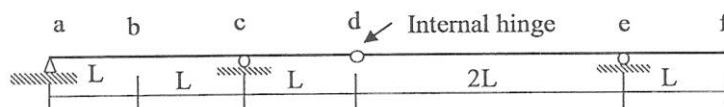


II) Find horizontal and vertical deflections of c, $E = 4000 \text{ksi}$, $I = 500 \text{in}^4$. Load is perpendicular to beam. (20%)



III) Draw indicated influence lines. Show numeric values at all lettered points which can be obtained by simple geometric analysis.

Find: R_e - Vertical Reaction at e, V_b - Shear at b, M_b - Moment at b, V_{CR} - Shear just to right of c. (20%)



本試題雙面印製

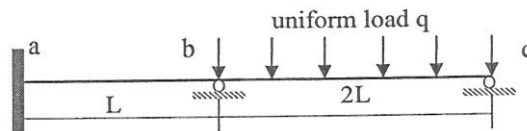
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IV) Find the reaction at b and plot the moment diagram. Constant EI. (20%)



V) Find the stiffness matrix for the degree-of-freedom shown. E, I, and L are the same for both members. Neglect axial deformations. (25%)

