

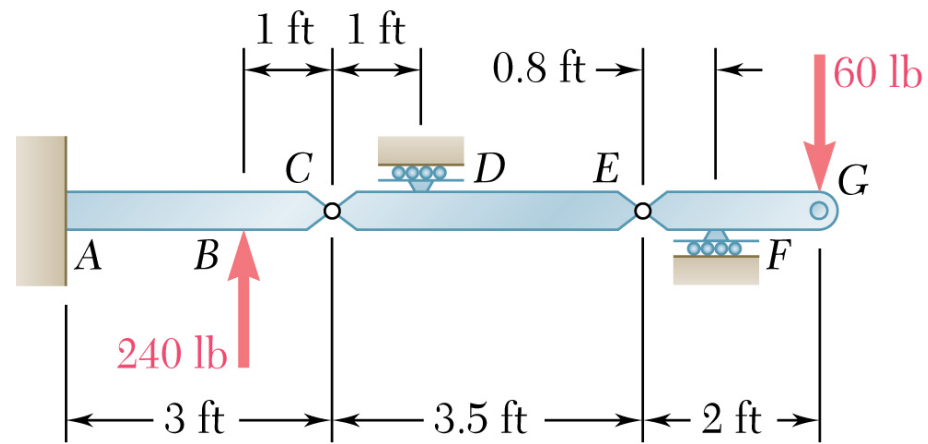
國立嘉義大學 100 學年度

生物機電工程學系碩士班 (甲組) 招生考試試題

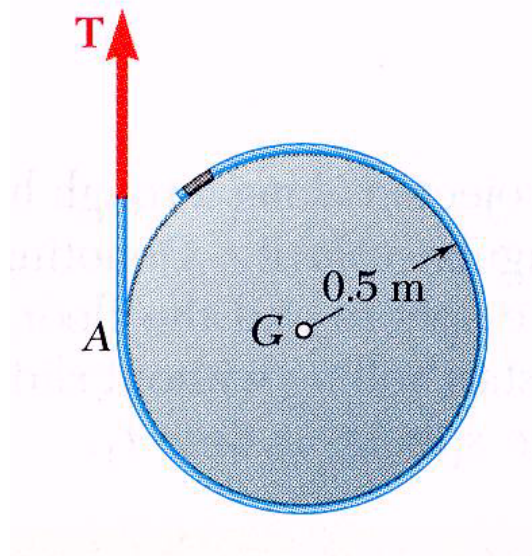
科目：工程力學 (※禁止使用計算機)

說明：如有條件不足，請自行假設。

1. For the frame and loading shown below, determine (a) the reaction at D, (10%) (b) the reaction at A. (15%)



2. A cord is wrapped around a homogeneous disk of mass 20 kg. The cord is pulled upwards with a force $T = 180$ N. Determine the acceleration of the cord. (25%)



3. The compound bar carries the axial forces P and $2P$, the moduli of elasticity are $3E$ for steel and E for aluminum, the cross-section areas are A for steel and $2A$ for aluminum, the lengths are $3L$ for steel and $2L$ for aluminum. Find the total elongation of the bar. (25%)



4. Draw the shear-force and bending-moment diagrams for the beam as shown below, by using the area method. (25%)

