

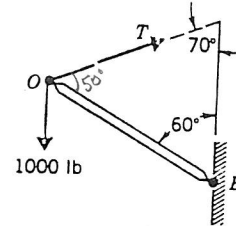
CONCORDIA UNIVERSITY

Faculty of Engineering and Computer Science
ENGR 242/2 Statics, Section V
Test #1

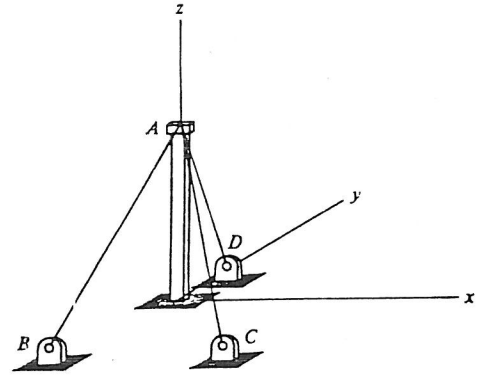
MARKS Attempt all questions; only calculators permitted

TIME: 60 Minutes

- 25 1) If the resultant of the 1000-lb vertical force and the tensile force T in the cable is to be in the direction of the boom OB , what must be the magnitude of T ?



- 50 2) The three wires are attached to a small collar A on the pole. The tension in each wire is 300 lb, and the coordinates are $A: (0,0,15)$ ft, $B: (-5,-4,0)$ ft, $C: (5,-4,0)$ ft, and $D: (0,7,0)$ ft. Determine the components of the reaction R of the pole acting on the collar.



- 25 3) Evaluate the sum of the moments about O_1 of the four forces. Evaluate the sum of the moments about O_2 of the four forces.

