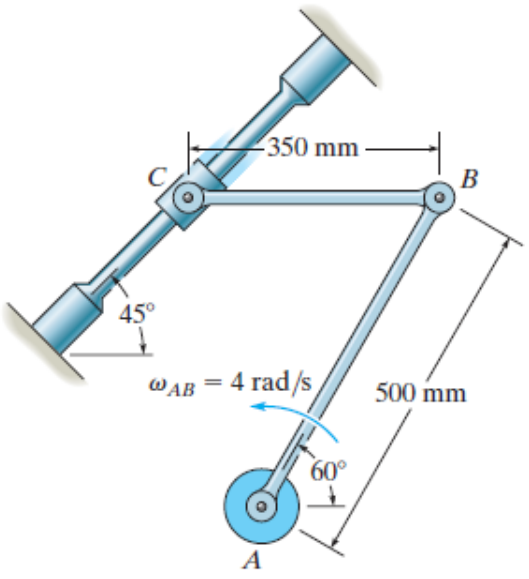
3) Knowing that link AB has a constant angular velocity of $\omega_{AB} = 4\ rad/s$ in the counterclockwise direction, determine the velocity and acceleration of the collar at C, and the angular velocity and angular acceleration of link BC at the instant shown. Link BC is horizontal at this instant.
Note that point A is fixed.
Clearly label your coordinate system.



40 marks