## ROSE-HULMAN INSTITUTE OF TECHNOLOGY

## Department of Mechanical Engineering

ES 204 Mechanical Systems

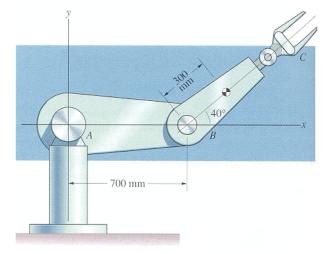
## Example Problem - Le 22

7.27 Arm BC has a mass of 12 kg and the mass moment of inertia about its center of mass is 3 kg-m². If arm AB has a constant clockwise angular velocity of 2 rad/s and arm BC has a counterclockwise angular velocity of 2 rad/s and a clockwise angular acceleration of 4 rad/s²,

## determine:

- a) the couple exerted on arm BC at B,
- b) the reaction at B

(taken from Dynamics, 2nd Edition by Bedford & Fowler)



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