

Prepared by: Mumin Özsipahi  
Room: C-206 Phone: 210 7232  
E-mail: [ozsipahi@metu.edu.tr](mailto:ozsipahi@metu.edu.tr)

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**Problem**

The bent rod  $ADGB$  supports two weights; one at the center of  $AD$  and one at the center of  $DG$ . There are ball-and-socket joint support at  $A$  and journal bearing at  $B$ . The bearing at  $B$  is properly aligned on the shaft. Determine the tension in cable  $DC$ .

Hint: Since the bearing at  $B$  is properly aligned on the shaft, there is no force along the  $z$  direction in joint  $B$  (i.e. only  $B_x$  and  $B_y$  exist in joint  $B$ ).

