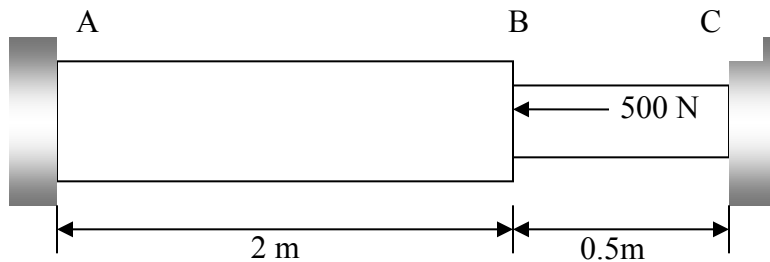


## TOPIC

Engineering Mechanics (Statics and Dynamics) – Section VII – Question 2

## QUESTION



A composite member ABC made of aluminum (AB) and steel (BC) is shown. A load of 500N is applied at B. Given

$$E_{Al} = 70\text{Pa} \quad \text{and} \quad E_{st} = 210\text{Pa}$$

$$A_{Al} = 5\text{cm}^2 \quad \text{and} \quad A_{st} = 3\text{cm}^2$$

The internal force in Newtons in the composite member ABC *just to the right of point B* most nearly is

- (A) 60.97 N
- (B) 400.00 N
- (C) 439.02 N
- (D) 500.00 N

## HINT

Draw free body diagrams to the left of B and right of B

The total elongation of ABC is zero.

## CONTRIBUTOR

Autar Kaw