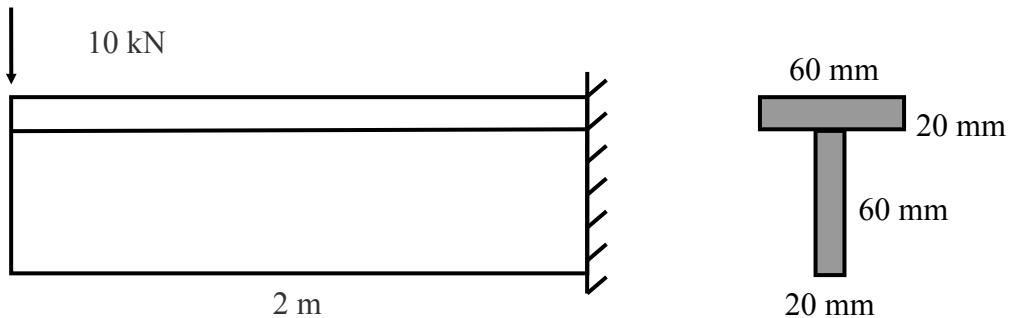## TOPIC
Strength of Materials – Section VIII – Question 5

QUESTION
A cantilever beam is loaded with a force of 10 KN and has a cross-section as shown. The maximum tensile stress in MPa in the beam most nearly is

10 kN

2 m

60 mm

20 mm

60 mm

20 mm

(A) 4.16
(B) 441
(C) 588
(D) 735

HINT
The second moment of area of the cross section is $1.36 \times 10^{-6} m^4$
The top of the beam is in tension.
The centroid is 50 mm up from the bottom of the cross section
The maximum moment is 20 KN–m.

CONTRIBUTOR
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