TOPIC
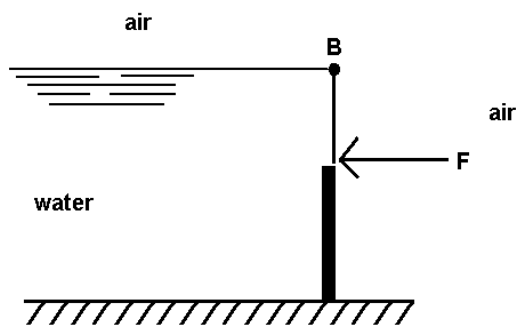Fluids – Section X – Question 9

QUESTION
A gate is formed using a plate of dimension 1m ×1m hinged at point B as shown below. The force
necessary to keep the gate from opening (in N) most nearly is

(A) 3280
(B) 4900
(C) 6570
(D) 9800

HINTS
- Find the force of the water on the plate
- Find the center of pressure through which this force acts
- Equate the moments of the force of the water and the force F around point B

CONTRIBUTOR
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