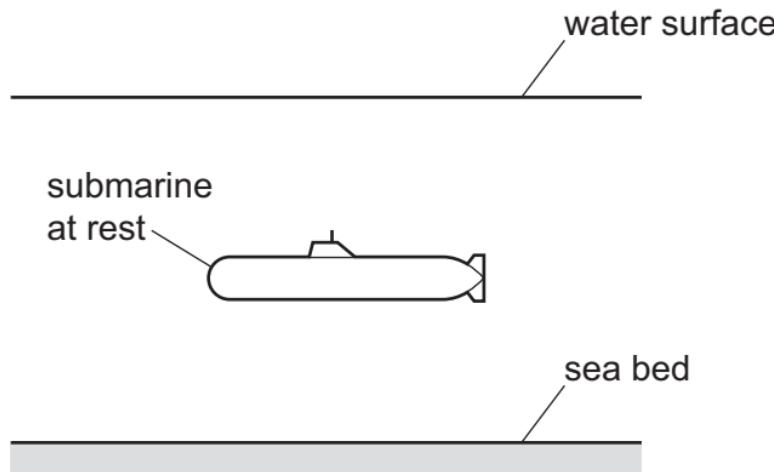


- 8 A submarine of total mass 3200 kg is at rest underwater.



The total mass of the submarine is suddenly decreased by 200 kg by pumping water out of the submarine horizontally in a negligible time. The upthrust acting on the submarine is unchanged.

The change in the total weight of the submarine causes it to accelerate vertically upwards.

What is the initial upwards acceleration of the submarine?

- A**  $0.613 \text{ ms}^{-2}$     **B**  $0.654 \text{ ms}^{-2}$     **C**  $9.81 \text{ ms}^{-2}$     **D**  $10.5 \text{ ms}^{-2}$