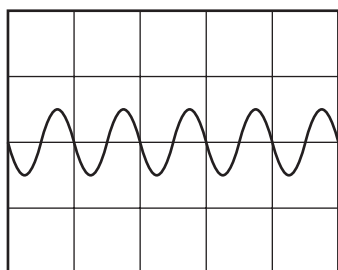


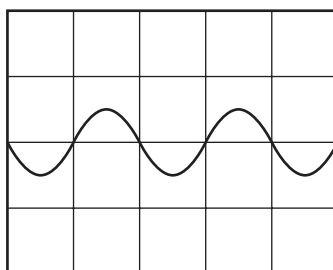
- 6 The Y-input terminals of a cathode-ray oscilloscope (c.r.o.) are connected to a supply of amplitude 5.0 V and frequency 50 Hz. The time-base is set at 10 ms per division and the Y-gain at 5.0 V per division.

Which trace is obtained?

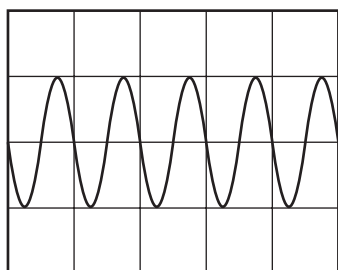
**A**



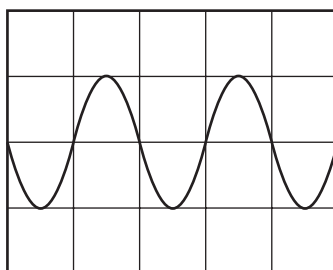
**B**



**C**



**D**



- 7 A body is released from rest and falls vertically in air of constant density.

Which statement about the motion of the falling body is correct?

- A** As it accelerates, its weight decreases so that its acceleration decreases until it travels with constant velocity.
- B** It accelerates initially at  $9.8 \text{ m s}^{-2}$  but the drag force increases so its acceleration decreases.
- C** Its velocity increases at a constant rate until its velocity becomes constant.
- D** The drag force of the air increases continually and eventually the velocity decreases.

**Space for working**