1. A student pushes with a constant force on an object that moves horizontally at a constant speed of 0.2 m/s for a distance of 0.80 m. What is the work done by the student

(a) 160 J (b) 10 J (c) 16 J (d) 0 J (e) need more information

The force applied by the student is not specified and cannot be figured out from the available information → **Correct answer is (e)**

2. You walk 5.0 m horizontally carrying an object that weighs 10 N. The amount of work you do is

(a) > 50 J (b) 50 J (c) < 50 J but > 0 (d) zero

The force is up, the displacement is horizontal → **Correct answer is (d)**

3. If the net work done on an object is zero, the kinetic energy

(a) decreases (b) remains the same (c) is zero (d) increases

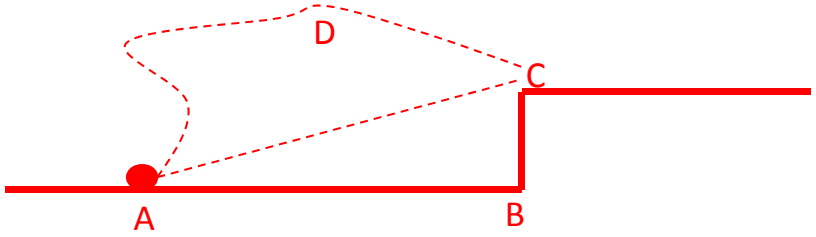
$W = \Delta K$ → since W=0, ΔK is zero → **Correct answer is (b)**

4. A shopper pushes a cart with a force of 35.0 N directed at an angle of 25.0° downward from the horizontal. Find the work done by the shopper as she moves down an aisle 50.0 m in length

(a) 1590 J (b)740 J (c) 31.7 J (d) 816 J

W = F d cos25 = 35 * 50 * cos25 J = 1586 j → **Correct answer is (a)**

5. The stone in the figure below can be carried from the bottom to the top of a cliff by various paths. Which path requires more work to overcome gravity?



(a) AC (b) ABC (c) ADC
(d) Depends on the lengths of the various segments and the details of the ADC path
(e) Work is the same for all paths

Gravity is conservative, the work is independent of path → **Correct answer is (e)**