

**Question 18**

A car is moving with constant acceleration has its speed reduced from  $3V \text{ ms}^{-1}$  to  $V \text{ ms}^{-1}$ , over a distance of  $D$  m when the driver applies the brakes. The car travels a further distance of  $S$  m until it comes to rest. The time  $T$  seconds represents the time when the driver applies the brakes until the car comes to rest. Then

- A.**  $D = 8S$  and  $T = \frac{2(D+S)}{3V}$
- B.**  $D = 4S$  and  $T = \frac{2(D+S)}{3V}$
- C.**  $D = 8S$  and  $T = \frac{S}{V}$
- D.**  $D = 4S$  and  $T = \frac{S}{V}$
- E.**  $D = 2S$  and  $T = \frac{D}{2V}$