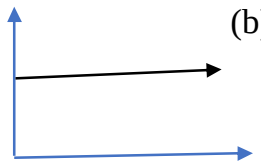
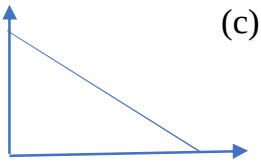
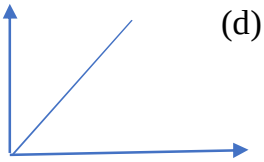
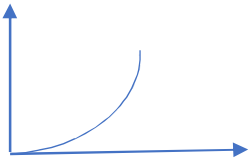
MULTIPLE CHOICE QUESTIONS

1. Which physical quantity is expressed in the unit m/s^2?
   (a) Velocity (b) acceleration (c) speed (d) displacement
2. Which of the following distance time graphs represent uniformly accelerated motion?

(a)  (b)  (c)  (d) 

3. A car travels the first half of its journey with a speed of 40 Km/hr and the next half with a speed of 60km/hr. What is the average speed of the car?
   (a) 48Km/hr (b)50km/hr (c) 40km/hr (d) 58km/hr

4. What does the area under the velocity -time graph represent?

   (a) acceleration (b) velocity (c) displacement (d) speed

5. If the displacement of an object is proportional to square of time, then the object moves with:

   (a) uniform acceleration (b) uniform velocity (c) uniform speed
   (d) none of the above

6. Which of the following can sometimes be 'zero' for a moving body?

   i. Average velocity

   ii. Distance travelled

   iii. Average speed

   iv. Displacement

   (a) Only (i) (b) (i) and (ii) (c) (i) and (iv)
   (d) Only (iv)

7. When a car driver travelling at a speed of 10 m/s applies brakes and brings the car to rest in 20 s, then the retardation will be:

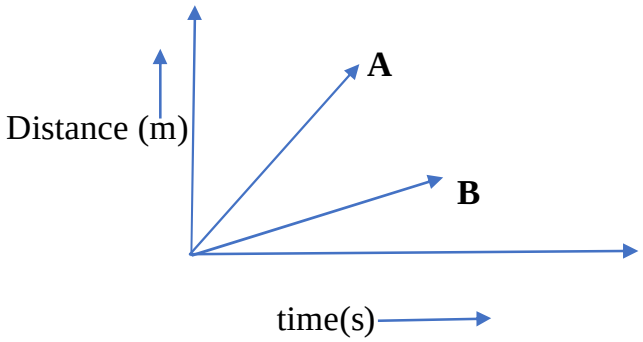
(a) + 2 m/s2 (b) − 2 m/s2
(c) 0.5m/s2 (d) + 0.5 m/s2

8. In which of the following cases of motions, the distance moved and the magnitude of the displacement are equal?

(a) If the car is moving on a straight road (b) If the car is moving in circular path

(c) The pendulum is moving to and fro (d) The earth is moving around the sun

9. Two cars A and B are moving on a levelled, straight road. Their distance time graphs are shown in the figure below. Which of the following is the correct statement regarding the motion of these cars?



(a)Both cars have same spee (a) A is faster than B (c) B is faster than A
(d) none of the above

10. An object travels 40m in 5 sec and then another 80m in 5 sec. What is the average speed of the object?

(a) 12 m/s (b) 6 m/s (c) 2 m/s (d) 0 m/s