PROBLEMS FOR PRACTICE

Subject : Physics

1. A motor car covers one third of total distance with \( v_1 = 10 \text{ km/h} \), second one-third part with \( v_2 = 20 \text{ km/h} \) and rest one-third part with \( v_3 = 60 \text{ km/h} \). What is the average speed of the car?
   (A) 18 km/h  
   (B) 45 km/h  
   (C) 6 km/h  
   (D) 22.5 km/h

2. A particle travels A to M along a straight line with a velocity of 8 m/s and M to A with a velocity of 2 m/s, then the average velocity of whole journey is:
   (A) 3.2 m/s  
   (B) – 5 m/s  
   (C) – 3.2 m/s  
   (D) 0 m/s

3. A train travels at a speed of 60 km/h for 0.52h, at 30 km/h for the next 0.24h and then at 70 km/h for the next 0.71h. What is the average speed of the train?
   (A) 59.9 km/h  
   (B) 69.6 km/h  
   (C) 89.8 km/h  
   (D) 79.1 km/h

4. The average speed of a moving object during a given interval of time is always:
   (A) the magnitude of average velocity over the interval  
   (B) the distance covered by the object divided by the time interval  
   (C) half of its speed at the end of time interval  
   (D) acceleration of body multiplied by time

5. A car starts from Jaipur, goes 50 km in a straight line to Dausa, immediately turns around, and returns to Jaipur. The time for this round trip is 2 hours. The magnitude of average velocity of the car for the round trip is:
   (A) 0 km/h  
   (B) 50 km/h  
   (C) 25 km/h  
   (D) 100 km/h

ANSWER - KEY

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