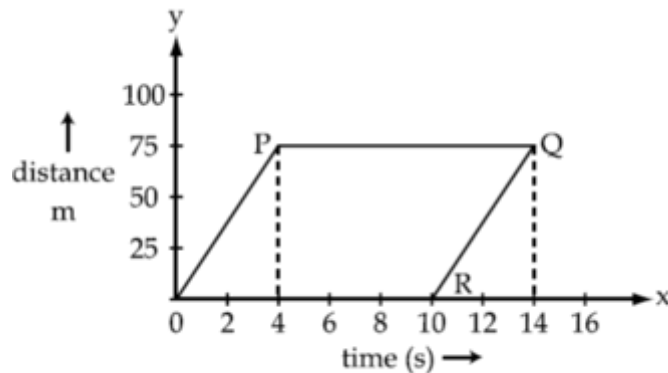


SHORT ANSWER QUESTIONS(MOTION)

- 1) A body is moving along a circular path of radius R . what will be the distance and displacement of the body when it completes half a revolution?
- 2) Distinguish between uniform and non uniform motion.
- 3) What is the difference between distance and displacement/
- 4) How does uniform linear motion differ from uniform circular motion? Give two points of differences.
- 5) The graph given below is the distance-time graph of an object.

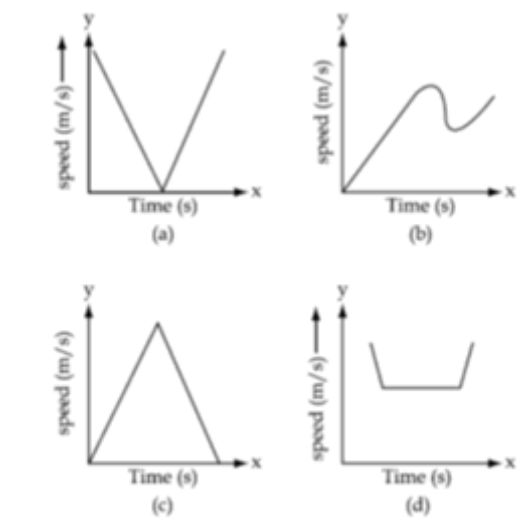


- (i) Find the speed of the object during first four seconds of its journey.
 - (ii) How long was it stationary?
 - (iii) Does it represent a real situation? Justify your answer.
- 6) An athlete completes one round of a circular track of diameter 49m in 20s. Calculate the distance covered and displacement at the end of 30s.
 - 7) Draw distance-time graphs for

(a) an object at rest.

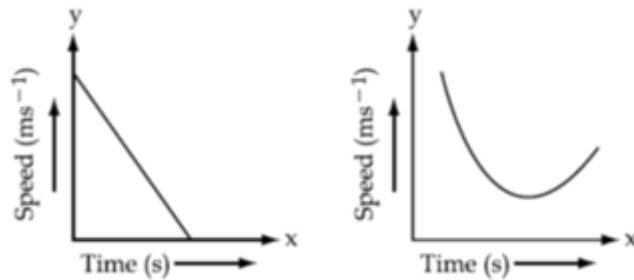
(b) Non-uniform motion.

- 8) How is uniform motion in a straight line different from uniform circular motion? Explain.
- 9) A body can have zero average velocity but not zero average speed. Justify.
- 10) A train 100m long is moving with a velocity of 60 kmh⁻¹. Find the time it takes to cross the bridge 1 km long.
- 11) A girl moves with the speed of 6 km/h for 2h and with the speed of 4km/h for the next 3h. Find the average speed of the girl and the total distance moved.
- 12) An electric train is moving with a velocity of 120km/hr. how much distance will it cover in 30s.
- 13) A particle moves 3m north, then 4m east and finally 6m south. Calculate the displacement.
- 14) A bus decreases its speed from 80 km/h to 50km/h in 4s. Find the acceleration of the bus.
- 15) How uniform motion is a straight line different from uniform circular motion? Explain.
- 16) Four speed-time graphs are shown below.

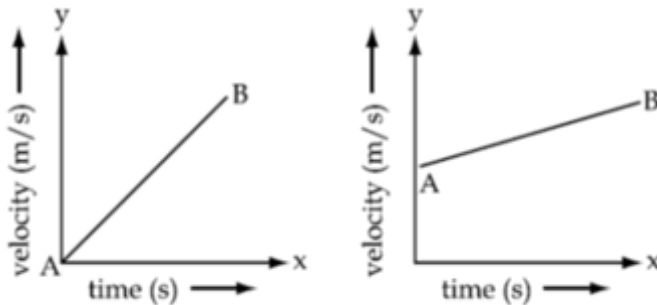


Explain the type of motion in each case.

- 17) On a 120 km track, a train travels the first 30 km at a uniform speed of 30 km/h. Calculate the speed with which the train should move over the rest of the track so as to get the average speed of 60 km/h for the entire trip?
- 18) What do the graphs shown below indicate :



- 19) Explain the differences between the two graphs.



- 20) A cyclist travels a distance of 4 km from P to Q and then moves a distance of 3 km at right angle to PQ. Find his resultant displacement graphically.
- 21) A farmer moves along the boundary of a square field of side 10 m in 40 s. What will be the magnitude of displacement of the farmer at the end of 2 min. 20 s?
- 22) Draw a velocity-time graph for
- (a) An object moving with constant velocity.
 - (b) An object moving with uniform retardation.