

Marking Scheme: Three questions carry 10 marks each. Each question has 3 sub-parts. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.

Question 1

А

An ant travels a distance of 8cm from Q to P and then moves a distance of 6 cm at right angles to P. Find resultant displacement.



B Fill in the blanks:

i)

- i) Slope of velocity time graph gives ____
- ii) If object covers equal distance in equal intervals of time it is said to be in _____ motion
- iii) Slope of distance time graph gives _____

C Define and give SI unit of following physical quantities: Distance, displacement, speed and velocity

Question 2

| A | Write difference between speed and v | elocity. |
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| | | |

- B Define acceleration and give its SI unit. When the object is said to be uniform acceleration and non-uniform acceleration?
- С
- Neha swims 90 m long pool. She covers 180m in one minute by swimming from one end to the other and back along the same straight path. Find average speed and average velocity of Neha.
- ii) What can you say about motion of the body whose distance time graph is a straight line parallel to time axis? Draw the graph

Question 3

- А
- i) Draw the distance-time graph showing uniform and non-uniform motion.
- ii) How will you calculate speed with the help of distance time graph? Describe with proper graph and formulae.
- B What information about the motion of an object are obtained from velocity time graph? Support your answer graphically.
- С
- i) An object travels 16 m in 4 s and then another 16 m in 2 s. What is the average speed of the object?
- ii) Under what condition(s) is the magnitude of average velocity of an object equal to its average speed?