

# PYQSide

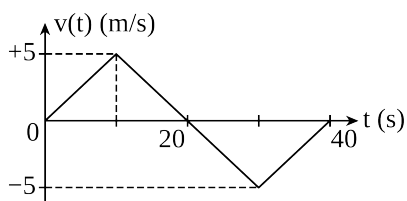
## JEE MAIN MOTION IN A STRAIGHT LINE — POSITION–TIME, VELOCITY–TIME AND ACCELERATION–TIME GRAPHS — PYQS

Max. Marks: 16

Questions: 4

### Section A (MCQ)

- Q.1** The velocity ( $v$ ) versus time ( $t$ ) plot of a particle is shown in the figure, for a time interval of 40 s. The total distance travelled by the particle and the average velocity during this period are, respectively \_\_\_\_\_ . [JEE Main 2026 (Online) 5th April Evening Shift]

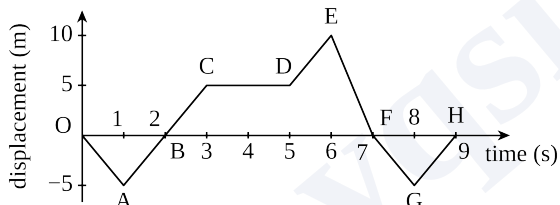


- (1) 25 m and zero      (2) 50 m and zero  
(3) 100 m and zero    (4) 100 m and 2.5 m/s

Scan or tap for the  
full solution



- Q.2** The displacement  $x$  versus time graph is shown below.

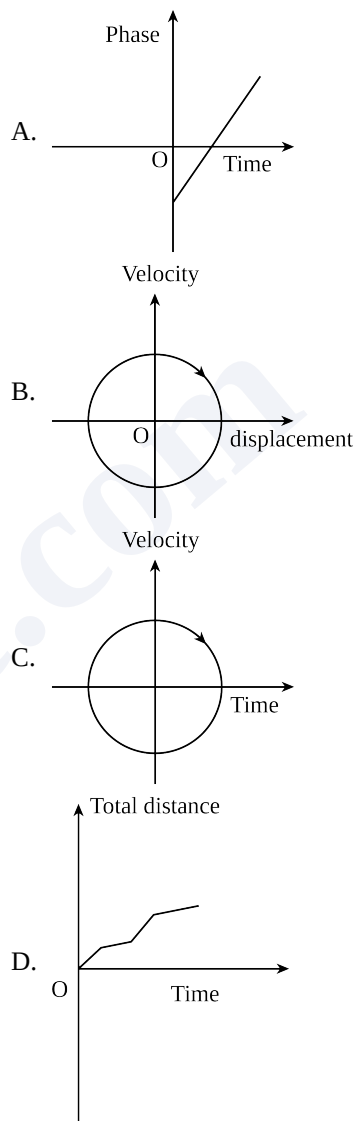


- A. The average velocity during 0 to 3 s is 10 m/s  
B. The average velocity during 3 to 5 s is 0 m/s  
C. The instantaneous velocity at  $t = 2$  s is 5 m/s  
D. The average velocity during 5 to 7 s and instantaneous velocity at  $t = 6.5$  s are equal  
E. The average velocity from  $t = 0$  to  $t = 9$  s is zero  
Choose the correct answer from the options given below : [JEE Main 2025 (Online) 4th April Evening Shift]  
(1) (B), (C), (D) only      (2) (B), (D), (E) only  
(3) (A), (D), (E) only      (4) (B), (C), (E) only

Scan or tap for the  
full solution



- Q.3** Which of the following curves possibly represent one-dimensional motion of a particle?



Choose the correct answer from the options given below : [JEE Main 2025 (Online) 3rd April Morning Shift]

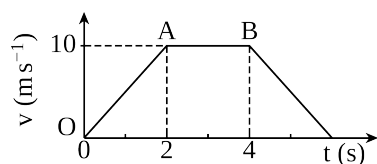
- (1) A, B and C only      (2) A, C and D only  
(3) A, B and D only      (4) A and B only

Scan or tap for the  
full solution



- Q.4** The velocity-time graph of an object moving along a straight line is shown in the figure. What is the distance covered by the object between  $t = 0$  to  $t = 4$  s?

[JEE Main 2025 (Online) 28th January Evening Shift]



- (1) 11 m      (2) 30 m      (3) 13 m      (4) 10 m

Scan or tap for the  
full solution



### ANSWER KEY

| Ques. | 1 | 2 | 3 | 4 |  |  |  |  |  |  |  |
|-------|---|---|---|---|--|--|--|--|--|--|--|
| Ans.  | 3 | 4 | 3 | 2 |  |  |  |  |  |  |  |