ARJUNA (NEET)

Kinematics

P XI M1 Pg34

DPP-01

Q1-7: Pg34
Q8-10: Pg35

1. The ratio of displacement to distance is
(A) Always = 1 (B) Always < 1
(C) Always 1 (D) May be 1

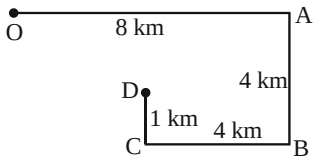
2. Consider the motion of the tip of the minute hand of a clock. In one hour
(A) The displacement is non-zero
(B) The distance covered is zero
(C) The average speed is zero
(D) The average velocity is zero

3. Which of the following statement is not true?
(A) If displacement covered of a particle is zero, then distance covered may or may not be zero
(B) If the distance covered is zero then the displacement must be zero
(C) The numerical value of ratio of displacement to distance is equal to or less than one
(D) The numerical value of the ratio of velocity to speed is always less than one

4. A boy completes one round of a circular track of radius 20 m in 50 seconds. The displacement at the end of 4 minute 10 second will be
(A) 40 m (B) 20 m
(C) 80 π m (D) Zero

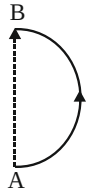
5. A body moves 6 m north, 8 m east and 10 m vertically upwards, what is its resultant displacement from initial position :
(A) $10\sqrt{2}$ m (B) 10 m
(C) $10/\sqrt{2}$ m (D) 10 × 2 m

6. A car moves from O to D along the path OABCD shown in figure. What is distance travelled and net displacement.
(A) 16, 5
(B) 17, 5
(C) 20, 4
(D) 15, 3



7. A particle starts from the origin, goes along the X-axis to the point (20 m, 0) and then returns along the same line to the point (–20m, 0). Find the distance and displacement of the particle during the trip.
(A) 60, –20 (B) –60, 20
(C) 60, 20 (D) None of these

8. A person moves on a semicircular track of radius 40 m. If he starts at one end of the track and reaches the other end, find the distance covered and magnitude of displacement of the person.
(A) 40 m
(B) 50 m
(C) 80 m
(D) 60 m



9. A person travels towards north by 4 m and then turns to west and travels by 3 m. The distance and displacement are
(A) 7 m and 5 m (B) 7 m and 7 m
(C) 7 m and 1 m (D) 7 m and 3.5 m

10. The angular displacement is $\frac{\pi}{2}$ radian in a circular path of radius 10 m. The distance and displacement are
(A) 5π m and $10\sqrt{2}$ m
(B) 10 m and 10 m
(C) 5 m and 10 m
(D) $5\sqrt{2}$ m and 10 m

ANSWERS

1. **(D)**
2. **(D)**
3. **(D)**
4. **(D)**
5. **(A)**
6. **(B)**
7. **(A)**
8. **(C)**
9. **(A)**
10. **(A)**

Note - If you have any query/issue

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