

NEET MOTION IN A PLANE — MOTION IN A PLANE WITH CONSTANT ACCELERATION — PYQS

Max. Marks: 16

Questions: 4

Section A (MCQ) — 4 questions

- Q.1** The x and y coordinates of the particle at any time are $x = 5t - 2t^2$ and $y = 10t$ respectively, where x and y are in metres and t in seconds. The acceleration of the particle at $t = 2$ s is [NEET 2017]
 (1) 5 m s^{-2} (2) -4 m s^{-2} (3) -8 m s^{-2} (4) 0

Scan or tap for the
full solution



- Q.2** A particle is moving such that its position coordinates (x, y) are (2 m, 3 m) at time $t = 0$, (6 m, 7 m) at time $t = 2$ s and (13 m, 14 m) at time $t = 5$ s. Average velocity vector ($\vec{v}_{av}$) from $t = 0$ to $t = 5$ s is

[AIPMT 2014]

- (1) $\frac{1}{5}(13\hat{i} + 14\hat{j})$ (2) $\frac{7}{3}(\hat{i} + \hat{j})$
 (3) $2(\hat{i} + \hat{j})$ (4) $\frac{11}{5}(\hat{i} + \hat{j})$

Scan or tap for the
full solution



- Q.3** A particle has initial velocity $(2\hat{i} + 3\hat{j})$ and acceleration $(0.3\hat{i} + 0.2\hat{j})$. The magnitude of velocity after 10 seconds will be

[AIPMT 2012 (Prelims)]

- (1) $9\sqrt{2}$ units (2) $5\sqrt{2}$ units (3) 5 units (4) 9 units

Scan or tap for the
full solution



- Q.4** A particle has initial velocity $(3\hat{i} + 4\hat{j})$ and has acceleration $(0.4\hat{i} + 0.3\hat{j})$. Its speed after 10 s is

[AIPMT 2010 (Prelims)]

- (1) 7 units (2) $7\sqrt{2}$ units (3) 8.5 units (4) 10 units

Scan or tap for the
full solution



ANSWER KEY

Ques.	1	2	3	4							
Ans.	2	4	2	2							