

EXAM PATTERN QUESTIONS

NEET 2020

PHYSICS

NEET 2020 CRASH COURSE

NEET 2020 crash courses provides a preparation strategy & direction, a speedy revision and getting a high score for NEET 2020 in 30-60 days. It is a focused course for the NEET aspirant's full preparation through a final mock test with important exam pattern, solving past questions and emphasize on the formulas to crack the NEET 2020.

○ Important problem-solving and revision of all important topics with the last 7 years NEET analysis. ○ Providing problem-solving tips and tricks for the exam. ○ 100% NEET pattern questions with detailed solutions. ○ Those questions are the focus on chapters with a high weight. ○ Misconceptions and repeated errors are cleared by the faculties. ○ The questions of complete syllabus designed by the experienced Misostudy faculty team. ○ Boosts confidence in students so that they can score well.

- The period of oscillation (T) depends upon radius R , density ρ and gravitational constant G . Derive formula for T .
(a) $k\rho G^{-1/2}$ (c) $k(\rho G)^{-1/2}$
(b) $k\rho^{-1/2}G$ (d) $k(\rho G)^{1/2}$
- A particle has a velocity $4\hat{i} - 3\hat{j}$ at any instant and has an acceleration $(-2\hat{i} + a\hat{j}) \text{ ms}^{-2}$. Find the time when the velocity becomes zero and find the value of a :
(a) 2 sec, 1.5 ms^{-2}
(b) 4 sec, 3 ms^{-2}
(c) 4 sec, 2.5 ms^{-2}
(d) 2 sec, 3 ms^{-2}
- A 175 m long train is travelling along a straight track with a velocity of 72 km h^{-1} . A bird is flying parallel to the train in the opposite direction with a speed of 18 km h^{-1} . The time taken by the bird to cross the train is :
(a) 35 s (c) 27 s
(b) 7 s (d) 11.6 s

4. Find a vector parallel to $(3\hat{i} + 4\hat{j})$ and having magnitude equal to 10.
- (a) $8\hat{i} + 6\hat{j}$ (c) $15\hat{i} + 20\hat{j}$
 (b) $6\hat{i} + 8\hat{j}$ (d) $5\hat{i} + 5\sqrt{3}\hat{j}$
5. $\vec{a} + \vec{b} + \vec{c} = 0$, then $\vec{b} \times \vec{c}$ is :
- (a) $\vec{c} \times \vec{a}$ (c) $\vec{b} \times \vec{c}$
 (b) $\vec{a} \times \vec{c}$ (d) $\vec{c} \times \vec{b}$
6. A boat crosses from A to B , which are just on the opposite banks. The width of the river is D . the speed of water is v_w and that of boat is v_B relative to still water. Assume $v_B = 2v_w$. Time taken by the boat, if it has to cross directly.
- (a) $\frac{2D}{\sqrt{3} \cdot v_B}$ (c) $\frac{D}{v_B \sqrt{2}}$
 (b) $\frac{\sqrt{3} D}{2v_B}$ (d) $\frac{D\sqrt{2}}{v_B}$
7. The equation of motion of a projectile is $y = 4x - \frac{x^2}{3}$. The horizontal component of velocity is 10 ms^{-1} . Then the range of the projectile is : ($g = 10 \text{ ms}^{-2}$)
- (a) 20 m (c) 80 m
 (b) 40 m (d) 160 m
8. A projectile is projected with an initial velocity of $(5\hat{i} + 8\hat{j}) \text{ ms}^{-1}$. If $g = 10 \text{ ms}^{-2}$, then the range of the projectile is :
- (a) 8 m (c) 24 m
 (b) 16 m (d) 4 m
9. Two stones are projected with the same speed but making different angles with the horizontal. Their ranges are equal. Angle of projection of one is $\pi/3$ and the maximum height reached by it is 102 metre. Then maximum height reached by the other :
- (a) 336 (c) 56
 (b) 224 (d) 34