

NEW STANDARD ACADEMY

Exam :
Date : 11-09-23

NEET - JEE
CLASS : 9TH M

Marks: 60
Time: 3 HRS

PHYSICS

1. Explain inertia and momentum.
2. It is required to increase the velocity of a scooter of mass 80 kg from 5 to 25 ms^{-2} in 2 seconds. Calculate the force required.
3. A bullet of mass 100 g is fired from a gun of mass 20 kg with a velocity of 100 ms^{-1} . Calculate the velocity of recoil of the gun.
4. The gravitational force between two objects is 49 N. How much distance between these objects be decreased so that the force between them becomes double?.
5. What is the mass of an object whose weight is 49 Newton?.
6. Define uniform acceleration. Give one example.
7. Find the distance covered by a particle during the time interval $t = 0$ to $t = 20$ s for which the speed- time graph is shown in figure.

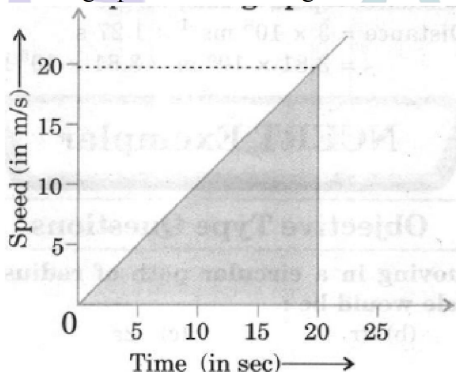


Figure: Fig. 8.35

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CHEMISTRY

1. Give four examples in which physical change and chemical change take place;
2. Calculate the mass of K_2SO_4 required to make it is 10 % w/w in 100 g of water.
3. A. What is solubility and formula.
b. 1. Solid in liquid (Factor)
2. Gas in liquid (Factor)
4. Properties of suspension(Six) show the size of particle.

5. Short terms

- a. Supersaturated
 - b. aqueous Solⁿ
 - c. Binary Solⁿ
 - d. Properties of Solⁿ(3)
6. 1. The solubility of NaCl in H_2O increase with rise in temperature which that of Li_2CO_3 decreases. Assign reason
 2. The M.P of a solid when determined experimentally come out to be 160°C But its actual M.P as given in standard book is 150°C . Predict the nature of solid.

BIOLOGY

1. Give the four major differences between chordata and non chordata with example.
2. Rohu, Seahorse (Hippocampus) Dog fish (Scoliodon) Torpedo belonging to which class.
3. Why are amphibians more successful on land? Give the reason.
4. Give the four major differences between Aves and mammals with example.
5. Give the name of an animal which is the connecting link between non chordata and chordates. Also give two characters.
6. What is the difference between warm blooded and cold blooded animals? Give suitable examples.
7. Give the four differences between cartilaginous fish and bony fish.

MATHS

1. Check which of the following are solutions of the equation $2x - y = 6$ and which are not :

(i) (3, 0)	(ii) $\left(\frac{1}{2}, -5\right)$
(iii) (2, -2)	(iv) $(\sqrt{3}, 0)$

2. Find the value of λ , if $x = -\lambda$ and $y = \frac{5}{2}$ is a solution of the equation $x + 4y - 7 = 0$.
3. Find the value of p if (3, 2) is a solution of $px - 5y + p^2 = 0$.

4. The taxi fare in a city is as follows. For the first kilometer, the fare is $j - 8$, for the subsequent distance it is $j - 5$ per km. Taking the distance covered as x km and total fare as $j - y$, write a linear equation for this information, and draw its graph.

5. Find five solutions of

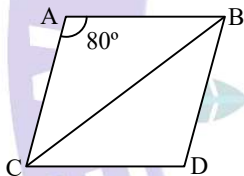
(i) $2x + 3y = 6$ (ii) $3x - 2y = 12$

6. Three angles of a quadrilateral are respectively equal to 110° , 50° and 40° . Find its fourth angles.

7. Show that each angle of a rectangle is a right angle.



8. In the given figure, ABCD is a rhombus. If $\angle A = 80^\circ$, then find $\angle CDB$



9. In a parallelogram ABCD, prove that sum of any two consecutive angles is 180° .

10. If the diagonals of a parallelogram are perpendicular to each other, prove that it is a rhombus.