NEW STANDARD ACADEMY

DPP -02 **NEET - JEE**

CLASS : 9TH

PHYSICS

1. Find the distance covered by a particle during the time interval $t = 0$ to $t = 20s$ for which the speed- time graph is shown in figure.

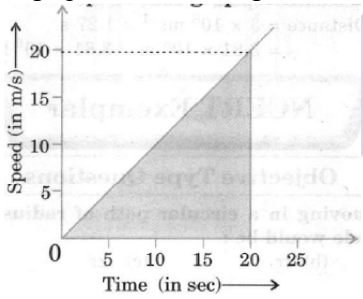

Figure: Fig. 8.35

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2. A bus moves 30 km in 30 min and the next 30 km. in 40 min . Calculate the average speed for the entire journey.
3. A girl runs for 10 min at a uniform speed of 9 km/h. What should be the speed that she runs for the next 20 min , so that the average speed comes to 12 km/h?.
4. It is estimated that the radio signal takes 1.27 seconds to reach the Earth from the surface of the Moon. Calculate the distance of the Moon from the Earth. Speed of radio signal $= 3 \times 10^8 ms^{-1}$ (speed of light in air).
5. Divya walked 2 km on a straight road and then walked back 1 km. Which of the two quantities involved in her walking is greater- the scalar or vector?.

CHEMISTRY

1. What is normal atmospheric pressure?
2. Define matter.
3. What do you mean by vapour?
4. Define condensation.
5. Why is Kelvin scale of temperature regarded as better scale than Celsius?

BIOLOGY

1. What is the function of cell wall and plasma membrane?.
2. What would happen if the plasma membrane breaks down?.
3. What is plasmolysis?.
4. What is the function of vacuoles?.
5. Why are plasma membrane called selectively permeable membrane?.

MATHS

1. Determine a and b if $\frac{5+\sqrt{3}}{7-4\sqrt{3}} = 94\ a + 3\sqrt{3}\ b$.
2. For the identity $\frac{7+\sqrt{5}}{7-\sqrt{5}} - \frac{7-\sqrt{5}}{7+\sqrt{5}} = a + 7\sqrt{5}b$,determine the rational numbers a and b.
3. Simplify :

   (i) $\left(\frac{243}{32}\right)^{-\frac{4}{5}}$ (ii) $\sqrt[3]{(343)^{-2}}$

4. Find two rational & two irrational numbers between 4 and 5.
5. Convert $\frac{35}{16}$ into decimal form by long division method.
6. Find the decimal representation of $\frac{8}{3}$.
7. Express each of the following decimals in the form $\frac{p}{q}$:

   (i) $0.\overline{6}$

   (ii) $0.\overline{35}$

   (iii) $0.5\overline{85}$
8. Simplify the following :

   (i) $(\sqrt[3]{5})^3$ (ii) $\sqrt[3]{64}$
9. Find the simplest R.F. of :

   (i) $\sqrt[3]{32}$ (ii) $\sqrt[3]{36}$ (iii) $2^{3/5}$
10. Retionalise the denominator :

    (i) $\frac{3}{\sqrt{5}}$ (ii) $\frac{\sqrt{2}+\sqrt{5}}{\sqrt{3}}$