

NEW STANDARD ACADEMY

Marks: 80

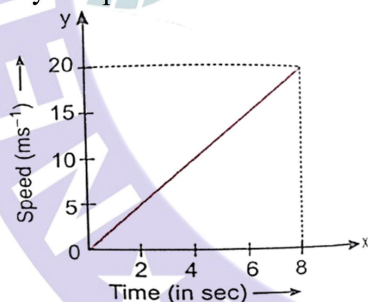
Date : 27-04-2026

CLASS : 9TH

Time: 3 hours

PHYSICS

1. In a 100 meter race, the winner takes 10 seconds to reach the finishing point. Find the velocity of the winner.
2. A bus travels 30 km at a uniform speed of 60 km/h and the next 30 km at a uniform speed of 30 km/h. Find its average speed.
3. An object travels 18 m in 4s, 30 m in next 6 s and 42 m in the last 5 s. Calculate the average speed of the object.
4. When will you say a body is in: (i) uniform acceleration (ii) non-uniform acceleration?
5. A vehicle starts from rest and attains a velocity of 72 km/h in 10 seconds. Calculate the acceleration of the vehicle.
6. In the given Fig. change in instantaneous speed of a particle with time is shown, then find the acceleration and distance covered by the particle in first 8 seconds.



7. A trolley, while going down an inclined plane, has an acceleration of 2 cm s^{-2} . What will be its velocity 3s, after the start?
8. Is uniform circular motion accelerated motion?
9. Discuss whether the walls of your classroom are at rest or in motion.
10. A motorboat starting from rest on a lake accelerates in a straight line at a constant rate of 3.0 ms^{-2} for 8.0s. How far does the boat travel during this time?

CHEMISTRY

1. What happens to the rate of diffusion if the temperature is increased?
2. Define sublimation.

3. Name any two substances that show sublimation.
4. The smell of hot sizzling food reaches us several metres away. However, it is not so in case the food is cold. Explain.
5. When ice comes in contact with skin, there is a cooling sensation. However, in case of steam severe burns are formed on the skin. How will you account for this?
6. Tarun got an invitation to attend a party. On coming to his place, he found that both his shirt and pants were wet. What steps he would take to dry them quickly?
7. Give reasons for the following:
 - (a) Gases fill up the vessel completely in which they are kept.
 - (b) Gases exert pressure on the walls of the containing vessel.
8. Give reasons for the following
 - (i) A solid does not flow but a liquid flows easily.
 - (ii) Ice at 0°C appears colder than water at the same temperature.
 - (iii) Camphor balls are stored in airtight containers.
9. What phenomenon occurs during the following changes?
 - (i) Size of naphthalene balls decreases
 - (ii) Wax melts in the sun
 - (iii) Drying of wet clothes
 - (iv) Formation of clouds
10. What is the difference between evaporation and vaporization?

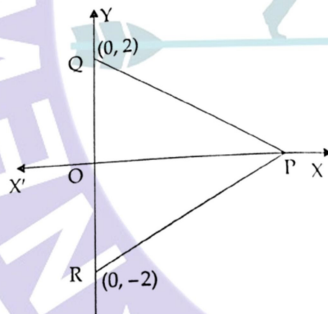
BIOLOGY

1. What is your function of mitochondria
2. Draw label diagram of mitochondria
3. Give full form of ATP
4. What is the semi autonomous organel give example
5. Define plasmolysis with example
6. Who given fluid mosaic model of plasma membrane explain
7. Give difference between plant cell and animal cell
8. Draw label diagram of chloroplast
9. Define photosynthesis.

10. Give chemical equation of photosynthesis

MATHS

- Plot the following points and check whether they are collinear or not:
(i) $(-1, 0)$, $(0, 1)$, $(2, 3)$
(ii) $(1, 1)$, $(2, -3)$, $(-1, -2)$
- Plot the points $A(2, 0)$, $B(6, 0)$ and $C(4, 6)$ on the graph paper. Also find the area of the triangle formed by these points.
- Find the distance between the following pairs of points:
(i) $(2, 3)$, $(4, 1)$ (ii) $(0, 0)$, $(36, 15)$
- Find the value of a , if the distance between the points $A(-3, -14)$ and $B(a, -5)$ is 9 units.
- Check whether the points $(5, -2)$, $(6, 4)$ and $(7, -2)$ are the vertices of an isosceles triangle
- In the adjoining figure, ΔPQR is equilateral. If the coordinates of the points Q and R are $(0, 2)$ and $(0, -2)$ respectively, find the coordinates of the point P .



- Write the coordinates of the vertices of a rectangle which is 6 units long and 4 units wide if the rectangle is in the first quadrant, its longer side lies on the x-axis and one vertex is at the origin.
- In which quadrant or on which axis each of the following points lie?
 $(-3, 5)$, $(4, -1)$, $(2, 0)$, $(2, 2)$, $(-3, -6)$
- Which of the following points lie on (i) x-axis? (ii) y-axis? $A(0, 2)$, $B(5, 6)$, $C(23, 0)$, $D(0, 23)$, $E(0, -4)$, $F(-6, 0)$, $G(\sqrt{3}, 0)$
- Look at the figure given below and write the following:
(i) Coordinates of B , C and E .
(ii) The point identified by the coordinates $(0, -2)$.
(iii) The abscissa of point H .
(iv) The coordinates of points A and D .

