

NEW STANDARD ACADEMY

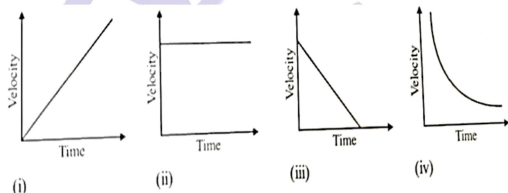
Date : 27-05-24

CLASS : 09TH

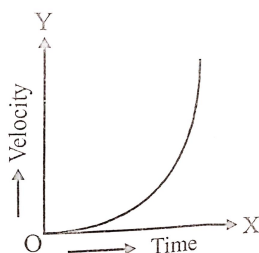
Marks: 80
Time: 3 HRS

PHYSICS

1. 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?
2. A particle with a velocity of 2m/s at $t=0$ moves in a straight line with a constant acceleration of 0.2m/s^2 . Find the displacement of the particle in 10s.
3. What type of motion is represented by the following graphs?



4. The velocity –time graph of body is as shown. What type of motion does the body possess?



5. A truck starts from rest and rolls down a hill with a constant acceleration. It travels a distance of 400 m in 20s. Find its acceleration. Find the force acting on it if its mass is 7 metric tonnes. (Hint: 1 metric tonne = 1000kg)
6. When a carpet is beaten with a stick, dust comes out of it. Explain.
7. A train is travelling at a speed of 90 kmh^{-1} . Brakes are applied so as to -

0.5ms^{-2} . Find how far the train will go before it is brought to rest.

8. A train is travelling at a speed of 90km/h . Brakes are applied so as to produce a uniform acceleration of -0.5ms^{-2} . Find how far the train will go before it is brought to rest.
9. A racing car has uniform acceleration of 4 ms^{-2} . What distance will it cover in 10s after start?
10. A car covers a distance of 2km. in 2.5 min if it covers half of the distance with speed 40 km/hr the rest distance it will cover with speed-

CHEMISTRY

1. Carbon burns in oxygen to form carbon dioxide. The properties of carbon dioxide are:
2. The most 'abundant' element in earth's crust is:
3. How can you say that sodium chloride is a compound?
4. What is meant by man – made elements
5. A sample of water boils at 102°C At normal pressure . Is this water pure? Will this water freeze at 0°C .
6. Name one solid, one liquid and one gaseous non-metals.
7. Give reasons for the following:
 - a) A liquid generally flows easily.
 - b) Doctors advise to put strips of wet cloth on the forehead of person having high temperature.
8. Which characteristic of a gas is used in supplying oxygen cylinders to hospital?

9. What is effect of the following on the rate of diffusion?
 - a) Temperature
 - b) Concentration
10. CO₂ is a gas justify the given

BIOLOGY

1. Explain the composite fish culture?
2. Name the two viral disease of poultry
3. What is layers?
4. What is blue Revolution?
5. Name the three exotic fish
6. Explain Aquaculture
7. What is the benefit of cattle forming?
8. Write two bacterial disease of cattle forming
9. Name two cross breed of cow.
10. What is poultry forming?

MATHS

1. The degree of the polynomial $\frac{x^4+x^5-x^8}{x^3}$ is
2. Solve $x^2 - \frac{y^2}{121}$
3. Factorise the $8x^3-27y^3$
4. Simplify the $(3x-1)^2-(3x-2)(3x+1)$
5. Using proper identities, expand $(3p-4q)(9p^2+12pq+16q^2)$
6. Factorise :- $(m+2n)^2+101(m+2n)+100$
Using proper identities, Factorise
7. $27x^3 + \frac{1}{64y^3} + \frac{27x^2}{4y} + \frac{9x}{16y^2}$
8. Simplify $\left(\frac{x}{3} + \frac{y}{5}\right)^3 - \left(\frac{x}{3} - \frac{y}{5}\right)^3$
9. Without finding cubes, factorise $(x-2y)^3+(2y-3z)^3+(3z-x)^3$.
10. If $a+b+c=12$ and $a^2 + b^2 + c^2 = 50$, then the value of $ab+ be+ ca$, is