NEW STANDARD ACADEMY

Marks: 80

11-11-2024 **CLASS : 9 TH** **Time: 3 HRS**

PHYSICS

1. The velocity of a body of mass 200g changes from 36km/h to 90km/h. What is the work done?
2. An object of mass 5kg is kept at a height of 100m. What is its potential energy? If it is dropped, what will be its kinetic energy just before hitting the ground?
3. A spring of stiffness k =20 is compressed to a distance of 30 cm. What is the potential energy stored in it?
4. Work done by gravitational force on a body is 4000J. Its weight is 200 N .If the body is initially at rest, Find the final velocity.
5. Potential energy of a body of a body of weight 550 N is 1100 J.Find its height .It is then released. Find its velocity just before it hits the ground & time taken to come to ground.
6. A body can do 22380J work in 1 minute. Calculate the power delivered in watt and horse power.
7. Oil is pumped from the tanks of a ship to a storage tank on land 45 m higher in elevation. What is the power required to pump 20,000 litres of oil per hour? Given that 1 liter of oil has a mass of 0.8 kg.
8. Which would have greater effect on the kinetic energy of an object, doubling the mass or doubling the velocity?
9. What shoud be the power of an engine required to lift 90 tonne of coal per hour from a mine whose depth is 200m (1 tonne = 1000kg)
10. 1 kW motor is used to pump water upwards from a well 10 m deep. Calculate the quantity of water pumped out per second.

CHEMISTRY

1. Define an atom.
2. What is atomic mass unit and unified mass? Are they same? What is the mass of 1u in grams?
3. Define atomic mass. What does it describe that atomic mass of sodium is 23u?
4. What is the actual mass of (a) one hydrogen (b) one carbon atom?
5. Explain the significance of symbol C
6. Is it possible to see an atom by microscope? If not they why? How can we see an atom?
7. Which element has been used as a standard for determining the atomic masses of various elements? What is the mass of this reference element in atomic mass unit?
8. Define atomic mass unit' How is it linked with relative atomic mass?
9. What mass of silver nitrate will react with 5.85g of sodium chloride to produce 14.35g of silver chloride and 8.5g of sodium nitrate if the law of conservation of mass is true?
10. Give an example of molecules of element and molecules of compound.

BIOLOGY

1. Name any two glands found in the human skin and their functions
2. What are granulocytes? Name its different types.
3. Distinguish between RBCs and WBCs.
4. What are the main function of adipose tissue
5. List the functions of connective tissue
6. Describe the different types of connective tissue proper.
7. Differentiate between tendon and ligament.
8. Write a short note on cartilage.

9. Describe the squamous epithelial tissue. Where it is located?
10. What is the role of platelets in blood of humans?

MATHS

1. Find the area of a triangle whose two sides are 18 cm and 10 cm and the perimeter is 42 cm.
2. If each side of a triangle is doubled , then find the percentage increase in the area of the triangle.
3. Two adjacent sides of a parallelogram are 9 cm and 8 cm . If one of its diagonal is 13 cm, then its area is
4. If the diagonals of a rhombus are 10cm and 8cm, then find its area.
5. The sides of a triangular plot are in the ratio 3:5:7 and its perimeter is 300m find its area.
6. The height and the slant height of a cone are 21 cm and 35 cm respectively. Find the volume of the cone
7. The volume of a right circular cone is 9856 cm^3.if the diameter of the base is 28 cm find.
   (i) Height of the cone
   (ii) Slant height of the cone
8. Find the surface area and the volume of a sphere of radius 7 cm.
9. A conical pit of top diameter 3.5m is 12m deep. what is its capacity in kilolitres
10. A conical tent is 10 m high and the radius of its base is 24 m. find Slant height of the tent