

NEW STANDARD ACADEMY

Date : 18-08-25

CLASS : 9TH

Marks: 80
Time: 3 hours.

PHYSICS

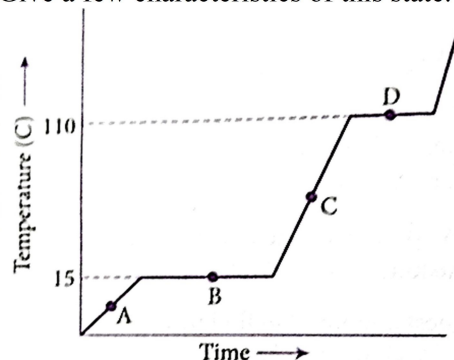
(Use $g=10 \text{ ms}^{-2}$)

1. The gravitational force between two bodies is 100 N . What will be the new force if the mass of one body is doubled and the distance between them is halved?
2. An object weighs 600 N on Earth. What will be its mass?
3. A ball is dropped from a height of 20 m. How long will it take to reach the ground?
4. If the distance between two objects is reduced to one-third, by what factor does the gravitational force between them change?
5. State two differences between mass and weight of a body.
6. Why is the value of g not the same at all places on Earth?
7. The weight of a body on Earth is 490 N. What will be its weight on the Moon?
8. Two bodies of masses 5 kg and 10 kg are placed 2 m apart. Calculate the force of gravitation between them.
9. Why does a body weigh less at the equator than at the poles?
10. A ball dropped from the top of a tower takes 4 seconds to reach the ground. Calculate the height of the tower.

CHEMISTRY

1. 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?
2. 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.
3. 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
4. Why Doctors advise putting strips of wet cloth on the forehead of a person having a high temperature.
5. The given graph shows the heating curve for a pure substance. The temperature rises with

time as the substance is heated. What is the physical state(s) of a substance at point A? Give a few characteristics of this state.



6. Name a method used to separate two miscible liquids
7. Which component of the mixture (iron and sulphur) reacts with dil. HCl and gives hydrogen gas?
8. What happens when a beam of light is passed through a colloidal solution?
9. Define the following terms:
(i) Dispersed phase
(ii) Dispersion medium
(iii) Brownian motion
(iv) Solvent
10. What is chromatography? State its three applications.

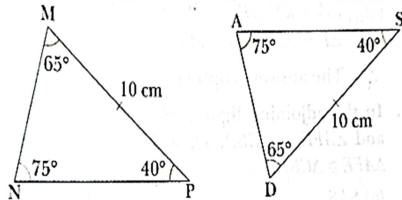
BIOLOGY

1. Give the main Four difference between prokaryotic and eukaryotic cell
2. What is modern cell theory?
3. Draw the label diagram of fluid mosaic model of plasma membrane
4. Give the four main difference between plant cell and animal cell
5. Give the name of largest and smallest cell
6. Give the three function of plasma membrane
7. What is the areolar connective tissue give the example
8. Give the function of adipose tissue
9. What is the connective tissue give the name of different type of connective tissue

10. What is the function of tendon and ligament?

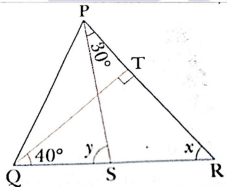
MATHS

1. In a triangle, two angles are 50° and 60° . Find the third angle.
2. The angles of a triangle are in the ratio 2 : 3 : 4 . Find all the angles of the triangle.
3. If two angles of a triangle are 70° & 80° . Find the measure of the exterior angle formed at the vertex of the third angle.
4. In $\triangle ABC$, $\angle A + \angle B = 65^\circ$ and $\angle B + \angle C = 140^\circ$. Find the angles.
5. PQR is a right triangle in which $\angle Q = 90^\circ$. If $\angle P : \angle R = 2 : 3$, then measure of least angle is?
6. What are congruent figures?
7. Write different types of triangles?
8. What is SAS congruence rule?
9. Consider the triangles shown



Which congruence criteria can be used to show that these triangle are congruent?

10. In figure If $QT \perp PR$, $\angle TQR = 40^\circ$ and $\angle SPR = 30^\circ$, the value of $y - x$ is



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