NEW ERA PUBLIC SCHOOL RAJBAGH,
Solved Assignment of Unit-III, 2021

Topic :→ FORCE, WORK AND ENERGY CLASS :→ 5th
Lesson no. :→ 10 SUBJECT :- SCIENCE

Answer the following questions.

Q1 Name the different types of forces and explain any two of them.

Ans Muscular force, Gravitational force, frictional force, Elastic force and mechanical force.

Muscular force

When we push or pull an object, we use our muscles to apply force. This force is called muscular force. We use muscular force to open a door, move a table, write in our notebook and so on.

Gravitational force

The gravitational force is a force that attracts any two objects with mass. We call the gravitational force attractive because it always tries to pull masses together, it never pushes them apart.

Q2 Name the six types of simple machines.

Ans The lever, inclined plane, wedge, screw, pulley and wheel and axle are the six types of simple machines.

Q3 What are the different types of levers?

(P.T.O)

Give two example of each type.

Ans Levers are grouped into three types depending on the positions of the effort, load and fulcrum.

1., First-class lever :→ Scissors, claw hammers are the examples of first-class lever.

2., Second-class lever :- Bottle openers and nut crackers are the examples of second-class lever.

3., Third-class lever :- Fishing rods, tweezers are the examples of third-class lever.

Q4 You have to load your suitcase on to a truck. You are not able to lift the suitcase. Which simple machine can help you do this? Why?

Ans Inclined plane because it helps us to move a load between two levels with less effort.

Q5 A single fixed pulley does not reduce the effort required to lift a load. How does it make our work easier?

Ans A single fixed pulley makes our work easier by changing the direction of the force.

Q6 What is energy? Name the different types of energy.

(P.T.O)

Ans Energy is the ability to do work. The different types of energy include light energy, heat energy, sound energy, electrical energy, mechanical energy, wind energy, water energy, solar energy and geothermal energy.

Q7 Write a note on wind energy and solar energy.

Ans Wind energy :- The energy that we get from the wind is called wind energy. We can use the force of the wind to do work for us. Wind can move the blades of a windmill, which in turn can be used to generate electricity or to grind grain.

Solar energy :- The energy that we get from sunlight is called solar energy. It can be used to carry out many functions on the earth. Solar panels convert solar energy into electrical energy, which is used to run machines.

(A) Multiple choice questions

Answers

1.) b, gravitational force
2.) c, elastic force
3.) d, bottle opener
4.) c, bicycle
5.) a, turbine.

(P.T.O)

(B) Identify the simple machine

Answers

1., Lever 2., Wedge 3., Inclined plane. 4., Screw
5., Pulley 6., Wheel and axle.

(C) Fill in the blanks.

Answers.

1., Complex 2., fulcrum 3., first 4, Wedges
5., mechanical energy 6, geothermal

Topic :→ WEIGHT, VOLUME AND DENSITY
Lesson no. :→ 11

Answer the following questions

Q1 What do you mean by density? How is Knowledge of density useful in finding out if a substance will float or sink in water?

Ans Density is defined as the weight of unit volume of a substance, or density = $\frac{\text{Weight}}{\text{Volume}}$.

Density is useful in finding out if a substance will float or sink in water. An object that is more dense than water will sink and an object that is less dense than water will float.

Q2. State Archimedes' principle.

Ans According to Archimedes' principle, when

(P.T.O)

an object is immersed in water, the upthrust is equal to the weight of water displaced by it.

Q3 What are the rules for floating and sinking, according to Archimedes' principle?

Ans The rules for floating and sinking according to Archimedes' principle are:-

1.) if the weight of an object is more than the upthrust, the object sink in water.

2.) if the upthrust is more than the weight of an object, the object floats in water.

Q4 Iron is denser than water so it sinks in water. But a boat made out of iron floats in water. Why?

Ans This is because of its shape. A ship is hollow. When the ship is in water, the entire volume of the ship displaces water to make space for itself. Thus, the volume of water displaced is much more than the volume of iron used in the ship. So, according to Archimedes' principle, the upthrust is also very high, more than the weight of the ship. Therefore, the ship floats in water.

Q5 When an object is immersed in water, why does its weight go down? How much weight is lost?

(P.T.O)

Ans

This is because weight of an object in water = weight in air - upthrust.
It loses weight equal to the weight of water displaced by it.

(A) Multiple Choice questions

Answers

1.) c) 2kg per litre 2.) c) sinks in water 3.) c) buoyant force 4.) a) It is less than water 5.) a) It rises up 6.) c) is weightless. 7.) d) 9kg.

(B) Complete the sentenses

Answers

1. – c) how closely molecules are packed in a substance.
2. – e) less in water.
3. – d) greater than the upthrust acting on it.
4. – a) has higher upthrust than weight.
5. – b) is the weight of water displaced.

(C) Fill in the blanks.

Answers

1.) weight 2.) Volumes 3.) density

4.) 1kg 5.) weight of water displaced.

(P.T.O)

Topic :- MOON
Lesson no. :- 12

Answer the following questions

Q1 How does the moon shine even though it does not have light of its own?

Ans The moon shines by reflecting the light given off by the sun.

Q2 Describe the surface of the Moon.

Ans Their is no life on the Moon. It does not have any water, and its surface is covered with a layer of dust. It has mountains and huge round pits called craters on its surface.

Q3 Why is there no rain on the moon?

Ans There is no rain on the moon - because there is no atmosphere surrounding the moon.

Q4 a, Does the moon actually change its shape every night?

b, Why do you see different shapes of the moon every night from the earth?

Ans a, No, the shape of the moon stays fixed. It is only the appearance of the moon that changes every night.

(b) This is because we only see the part of the moon that reflects sunlight to us.

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The rest of the moon is dark.

Q6 Explain how a lunar eclipse occurs.

Ans A lunar eclipse occurs when the moon moves into the earth's shadow. This can occur only when the sun, earth and moon are exactly or very closely arranged in a straight line.

Q7 Mention two ways in which artificial satellites are useful to us.

Ans The following are the two ways in which artificial satellites are useful to us.

1.) Artificial satellites help in communications. They are used for sending telephone signals to far-off places.

2.) It helps to study the atmospheric conditions so that accurate forecasts of weather can be made.

(A) Multiple choice questions.

Answers

1.) d) 384,400Km 2.) c) Lake 3.) a) New moon

4.) c) The moon comes between the sun and the earth. 5.) b) Apollo 11

(B) Mark '✓' for true and 'x' for false statements

(P.T.O)

Answers

1.) X 2.) ✓ 3.) ✓ 4.) X 5.) X

(C) Unscramble the letters to form words.

Answers

1.) CRATER 2.) TELESCOPE 3.) SATELLITE 4.) CRESCENT
5.) GIBBOUS 6.) ECLIPSE

PERIODIC- TEST-2

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Answer the following questions.

Q1 What is the force that makes a material resist stretching and go back to its original state?

Ans Elastic force is the force that makes a material resist stretching and go back to its original state.

Q2 What is the difference between a sling and a splint?

Ans A sling is usually a triangular bandage used to support an injured arm whereas a splint is a piece of metal, plastic or wood that is used to maintain in position a movable part.

Q3 Your friend suddenly starts bleeding from the nose. What advice will you give your friend?

Ans I will advice my friend to sit up

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straight and lean slightly forward and keep the nostrils pinched till the bleeding stops.

Q4 Can you live on the moon? Why or Why not?

Ans No, we cannot live on the moon because there is no oxygen and water which is necessary for the life.

PRACTICE THE CHAPTER WISE DIAGRAM ALONG WITH LABELLING OF THE FOLLOWING

1. Three simple machines — Page no. 82, 83, 84, 85
2. Solar Eclipse — Page no. 104
3. Phases of the moon — Page no. 102