

Chapters:

Chapter 11: Force, work and energy (18marks)

Chapter 12: Water and it's forms (17marks)

Chapter 14: Our solar system (15marks)

Notes

**Chapter – 11
Force work and energy**

A. Tick (✓) mark the correct answer:

1. Gravity and friction are the types of

- a. Machine () b. **Force (✓)** c. Pulley () d. Gravity ()

2. Who discovered the law of motion?

- a. Galileo () b. **Newton (✓)** c. J. C. Bose () d. None of them ()

3. Ramps and slopping roads are the examples of

- a. Pulleys () b. Liver () c. **Inclined plane (✓)** d. Screw ()

4. We get energy from

- a. Sun () b. Wind () c. Water () d. **All of them (✓)**

B. Answer these questions:

1. What is force?

Ans: Force is a push or pull. Force is the capacity to do work or cause physical change.

2. What is gravitational force? Explain it with an example.

Ans: Gravitational force is the invisible force through which the earth pulls everything towards it's centre.

Example: When we throw a ball up, it goes up to a certain extend and then falls back to the ground. This is due to the pull of the earth or the force of gravitation that makes the ball come down to the earth after reaching a certain height.

3. When is work done?

Ans: Work is done when it can change the objects shape or position,due to the force applied on it.

4. Who was Sir Isaac Newton?

Ans: Sir Isaac Newton was a scientist who discovered the three laws of motion and the law of gravity.

5. What is energy? Write different sources of energy.

Ans: Energy is the ability or the capacity to do work.

The different sources of energy are sun, wind, water, agricultural residue, fuel, wood and animal dung.

6. What is machine? Name the different types of simple machine.

Ans: A machine is a tool that is used to make work easier.

The different types of simple machine are levers, pulleys, inclined plane, screws, wedges and wheel and axle.

C. Define the following:

1. **Force:** Force is a push or pull.
2. **Work:** Work is the change in Object's shape or position due to force.
3. **Friction:** Friction is a force which occurs when two surfaces rub against one another.
4. **Solar energy:** Solar energy is the energy that comes from the light of the sun.
5. **Hydro energy:** Hydro energy is the energy that comes from water.

D. Write one word:

1. A push or pull **Force**
2. He discovered three laws of motion. **Sir Isaac Newton**
3. Energy comes from the sun. **Solar energy**
4. It turns winds into electricity. **Wind turbine**
5. Energy comes from water. **Hydro energy**

E. Write T for true and F for false:

1. Force is the capacity to do work. (T)
2. Work is done if there is no change after force is applied. (F)
3. Lever machine is used for lifting object. (F)
4. Solar energy comes from the sun. (T)
5. Hydro energy is derived from wind. (F)

Chapter 12 Water and it's forms

A. Tick (✓) mark the correct answer:

1. Water covers over _____ of the earth's surface.

- a. 15% () b. 70%(✓) c. 79% () d. 100% ()

2. Very small rain drops are called _____

- a. Snow () b. Drizzle (✓) c. Hail () d. None of them ()

3. _____ is the safest way to purify water.

- a. Filtering () b. Boiling (✓) c. Sedimentation () d. All of them()

4. _____ is responsible for the formation of clouds.

- a. Condensation (✓) b. Evaporation () c. Precipitation () d. None of them()

B. Answer these questions:

1. Explain the water cycle.

Ans: The process of recycling water is called water cycle. In this process water changes its state between liquid, ice and water vapour.

The surface water turn into water vapour in the atmosphere by the heat of the sun. Water vapour rises to the atmosphere and cools. The cooler temperature turns water vapour into tiny droplets and make up clouds. When the water droplets grow larger, they fall to the ground as rain, snow or other types of precipitation. Thus continues the water cycle over and over.

2. What is the process of evaporation?

Ans: Evaporation is the process when water passes from a liquid to a gas.

3. How do clouds form?

Ans: When water vapour rises in the atmosphere, the cooler temperature turns the water vapour into tiny droplets by a process called condensation. This water droplets form clouds.

4. How is precipitation important? Write it's harmful effects.

Ans : Precipitation is important because it helps the atmosphere to balance.

Precipitation can be harmful as too much rain and snow can cause severe flood and accident.

5. How is snow formed?

Ans : Snow is formed from snow flakes. Snow is a type of precipitation. Snow is formed where the temperature is below freezing.

6. How does water get polluted?

Ans : Water gets polluted by chemicals, waste from our homes, soaps and detergents pass through the drains and mixes with water bodies make the water polluted.

7. How can you purify polluted water?

Ans: We can purify polluted water by boiling, sedimentation and decantation and filtering.

C. Write T for true and F for false:

- 1. Water in lakes and river evaporates into atmosphere due to sun's heat. (T)
- 2. Precipitation occurs when droplets form due to cooling air. (T)
- 3. Polluted water make us healthy. (F)
- 4. Filtration is a better method than boiling. (F)
- 5. Snowflakes form in clouds where the temperature is below freezing. (T)

D. Match the following:

1. Very cold water droplets	a. Drizzle (3)
2. Tiny water droplets	b. Snowflakes (4)
3. Very small raindrops	c. Sleet (5)
4. Ice crystals	d. Rain (2)
5. Melted snowflakes or rain drops	e. Hail (1)

Chapter 14

Our solar system

A. Answer these questions:

1. What is the solar system?

Ans: The sun with the celestial bodies that revolve around it is the solar system.

2. What are planets? What do you mean by dwarf planet?

Ans: Planets are heavenly bodies that revolve around the sun.

A dwarf planet orbit around the sun but unlike a planet, it does not clear away objects in its neighbourhood and have a nearly round shape.

3. What are stars?

Ans: Stars are balls of hydrogen and helium gas that shines brightly. Our sun is a star.

4. What is a satellite?

Ans: Any celestial body orbiting around a planet is a satellite.

5. On which planet life exists and why?

Ans: Life exist only on planet earth because the earth is the only planet which has water and air needed for living.

6. What causes day and night?

Ans: The rotation of the earth causes day and night.

7. What causes the seasons?

Ans: The earth's revolution causes the seasons.

B. Name the following:

1. The star gives us heat and light. Sun
2. The planet is red in colour. Mars
3. Largest planet in the solar system. Jupiter
4. The imaginary line. Axis
5. The planet has seven rings. Saturn
6. The planet takes 165 years to circle around the sun. Neptune

C. Write T for true and F for false:

1. The sun is a planet. (F)
2. The earth has only one moon. (T)
3. Venus is called the evening star. (T)
4. Mars is the largest planet in the solar system. (F)
5. The earth completes one rotation in 24 hours. (T)

D. Tick (✓) mark the correct answer:

1. The planet closest to the sun is

- a. Mars () b. Mercury (✓) c. Venus () d. Earth ()

2. Life exist only this planet.

- a. Earth (✓) b. Mars () c. Jupiter () d. Uranus ()

3. The planet that can be seen without the telescope is

- a. Neptune () b. Mars () c. Saturn (✓) d. Jupiter ()

4. Venus takes _____ to spin around it's axis

- a. 165 days () b. 243 days (✓) c. 24 days () d. 365 days ()

5. The planet known as red planet

- a. Mars (✓) b. Mercury () c. Venus () d. Earth ()
