New Era Public School
Solved Assignment of Term - I
Class: 6th Subject: Science
Lesson no: 07 "Changes around us"

Short Answer Questions:

Q1: Give two examples to show that changes can be observed by their effects.

Ans: There are so many changes that takes place on their own and can be observed by their effects. For example, day changes into night and night changes into day, Babies grow to become adults. Seed grow into plants and trees.

Q2: Distinguish between physical and chemical changes?

Physical changes	Chemical changes
1. Changes takes place only in physical properties as no molecular changes takes place.	1. Changes takes place in chemical properties due to molecular changes.
2. No new susblance is formed	2. New substances are formed.
3. Mostly reversible	3. Mostly irreversible
4. Energy changes are small.	4. Energy changes are large.

Q3. Distinguish between a reversible and an irreversible change?

Ans:

Reversible	IRreversible
1. Changes that can be easily reversed are called reversible changes.	Changes that cannot be reversed are called irreversible changes.
2. For example, wax is solid at room temperature but melts upon heating.	2. For examples, decay of food and the changing of milk to curd.

Q4. Define chemical change?

Ans: Changes that involve the formation of new substances are called chemical changes.

Q5. Describe the two changes that are seen when a candle burns?

Ans: When a candle burns, two changes take place simultaneously.

i) The minor change is that a small amount of wax melts due to the heat of the flame. No new substance is formed in this process. This is a physical change.

ii) The major change is the burning of wax, which produces carbon dioxide, soot and water. This is a chemical change.

Q6. Why is the germination of a seed a chemical change?

Ans: The germination of a seed is a chemical change because a seed has developed into a complete plant which is permanent and irreversible.

Long Answer Questions

Q1. State four characteristic each of Physical and chemical changes.

Ans: The following are some characteristics of Physical changes:

i) A Physical change affects only Physical Properties such as size, shape, and State of a substance.

ii) No new substance is formed.

iii) A Physical change can be either reversible or irreversible

iv) The amount of energy required to carry out a Physical change is small.

The following are some characteristic of Chemical changes.

i) A chemical change is the result of a chemical reaction between reactants to form one or more Products.

ii) New substances with different properties are formed.

iii) Chemical changes are mostly irreversible in nature.

iv) The amount of energy involved in a chemical change is substantial, as in the case of burning.

Q2. write a short note on chemical reactions

Ans: In a chemical reaction, a substance may either split to form its constituent elements or compounds, or two or more elements or compounds may combine or rearrange to form new compounds. The substances that take part in the chemical reaction are called reactants. The substances that are formed as a result of the chemical reaction are called Products.

A chemical reaction is represented as

$$C + O_2 \longrightarrow CO_2$$

Reactants Product.

Q3. Only chemical changes are irreversible. Do you agree? Give reasons and examples.

Ans: Yes, mostly chemical changes are irreversible. For example: An iron nail left out in moist air rusts. Rusting is a chemical change in which iron reacts with oxygen and form rust (iron oxide). Since a new substance is formed, rusting is a chemical change.

The germination of seeds is another example of chemical change. However, some changes cannot be reversed.

Q4. Write a note on fast and slow changes.

Ans: **Fast changes:** changes that take place instantaneously or over a short period of time are called fast changes. The burning of incense, bursting of fire crackers and heating of water are some examples of fast changes.

Slow changes: changes that take place over a long time are called slow changes. The growing of a calf into a cow and the rusting of iron are some examples of slow changes.

A) Multiple Choice Questions:

1. c) 2. d) 3. c) 4. b) 5. a) 6. c) 7. d) 8. b)

9. 10.

B. Fill in blanks:

1. Chemical 2. Physical 3. reversible

4. irreversible 5. Chemical 6. Irreversible, Chemical 7. irreversible, Chemical

8. Irreversible Physical.

C. True or False:

1. T 2. T 3. F 4. F 5. T

Lesson No: 08 Topic: Living and Non-Living

Short Answer Questions:

Q1. What is growth?

Ans: Growth is the gradual increase in the size of an organism as it matures.

Q2. Why do animals move?

Ans: Animals move as they need to find food and to escape from enemies.

Q3. A plant grows towards sunlight. Identify the stimulus and the response.

Ans: If we keep the plant away from the sunlight, the stem of the plant will bend towards the direction of the sunlight.

Here sunlight is the stimulus and the bending of the stem is the response.

Q4. What is meant by Photosynthesis?

Ans: The process by which plants turn carbon dioxide and water into carbohydrates and oxygen using light energy trapped by cholorophyll is called Photosynthesis.

Q5. Why are most animals and fungi called heterotrophs?

Ans: Animals and Fungi cannot prepare their own food. They are dependent directly or indirectly on green plants for their food and are therefore called heterotrophs.

Q6. What is meant by the term excretion?

Ans: The process by which waste material is removed from the body is called excretion.

Long Answer Questions

Q1. What are the basic characteristic of living things? Explain growth, movement and lifespan in an organism?

Ans: All living things have some characteristic that distinguish them from non-living things. All living things can move, grow and reproduce.

Growth: is the gradual increase in the size of an organism as it matures. As an animal or a plant develops, it becomes larger and heavier. The growth of plants is very different from that of animals. A tree grows throughout its life but animals usually stop growing when they reach a certain age.

Movement: The movement of an oreganism from place to place is called locomotion. Cattle move around a field to graze, elephants move to forage for food, tigers move to hunt for food, humans move their arms and legs

to do their daily work. Movement in plants is not as obvious as in animals. Different parts of plants grow towards light, soil or water.

Lifespan: living organisms cannot continue to live forever. They exist only for a particular period of time. There are four stages in the life of every individual organism — beginning or birth, growth, maturity and death. The period over which an organism lives, from birth to death is called its life span.

Q2. How do plants make their own food? what do they need to make their food?

Ans: Plants use carbon dioxide from air, light energy from sunlight and water from the soil to make carbohydrates. Cholorophyll helps the plant to trap the energy in sunlight.

The process by which plants turn carbon dioxide and water into carbohydrates and oxygen, using light energy trapped by chlorophyll is called photosynthesis.

Q3. How does movement in animals differ from movement in plants?

Ans: Animals cannot prepare their own food, they move from one place to another in search of food and shelter. For example: cattle move around a field to graze, elephants move to forage for food. humans move their arms and legs to do their daily work

Movement in plants is not as obvious as in animals. Different parts of plants grow towards light, soil or water. for example sunflower buds turn towards sunlight and plant roots grow towards water.

Q4. Why do living organisms respire? What organs do they use?

Ans: Living things need energy to grow, to move and to fight diseases. Respiration helps living things obtain this energy. most organisms have special organs to take in oxygen. Human breathe in air through the nostrils into lungs. Many animals living in water, such as fish, use their gills. Some animals, which do not have gills or lungs, breathe in other ways. Earthworms

breathe through their body surface, while insects breathe through holes in their bodies called spiracles.

Q5. Why is the process of excretion very important? How do plants excrete?

Ans: In living organisms, some of the by-products of metabolism are poisonous and have to be sent out of the body. The process by which waste material is removed from the body is called excretion. undigested food and some products of metabolism are excreted as faeces. Excess water and other products of metabolism are excreted through urine and sweat.

In plants, the waste products are excreted either as gases through the stomata or as gum and resin.

Q6. What is meant by adaptation? Give two examples.

Ans: Adaptation is the process by which a living organism changes to survive and reproduce in its environment. Adaptation happens over many generations and the

changes are passed on from one generation to the next. for examples

1. A polae bear has thick fur to help it stay warm in the cold polar regions
2. A dog adapts to warm weather by shedding its hair.

A) Multiple choice Questions

1. a) 2. c) 3. d) 4. a) 5. d) 6. d) 7. b) 8. d) 9) d) 10. c).

B) Fill in the blanks.

1. cells 2. cells 3. gravity 4. autotrophs 5. Stimulus 6. Gills 7. respiration 8. gum and resin 9. vegatative reproduction 10. True

C) TRUE OR FALSE

1. F. 2. T 3. F 4. T 5. T 6. F 7. F 8. T 9. F

Lesson No. 9 Topic: Getting to know plants

Short Answer Questions:

Q1. What is a Shrub?

Ans: A Shrub is medium-sized plant, about 1-3 metres in height. Shrubs have thin, hard stems above the ground. For examples Rose, hibiscus and lemon plants.

Q2. How is a taproot different from a fibrous root?

Ans. The taproot is the main root that grows vertically down into the soil when a seed germinates. While as fibrous root grow as a cluster of fine roots at the base of the stem.

Q3. What is the function of a stem tendril?

Ans: stem tendril help the plant to climb by holding on to an object and thus provide support.

Q4. Why is the leaf called the food factory of the plant?

Ans: Leaf makes the food and is hence called the food factory of the plant.

Q5. How can photosynthesis be written down as a chemical reaction?

Ans: Photosynthesis can be written down as a chemical reaction:

Carbon dioxide + water $\xrightarrow[\text{Chlorophyll}]{\text{Sunlight}}$ Glucose + oxygen.

Q6. What is a pedicel?

Ans: The flower is attached to the stem by a stalk known as Pedicel

Q7. What is Pollination?

Ans: The transfer of Pollen from an anther to a stigma is called Pollination.

Q8. What does a seed contain?

Ans. The seed contains some stored food which is later used up during germination.

Q9. Which part of the flower usually develops into a fruit?

Ans The ovary of the flower usually develops into a fruit.

Long Answer Questions:

Q1. What are the functions of the stem?

ans: The functions of the stem are:

1. The stem carries water and dissolved mineral salts from the roots to the leaves.
2. It also carries food from the leaves to the other parts of the plant
3. It supports the weight of the branches, leaves, flowers and fruits.
4. It holds the leaves in such a way that they are exposed to maximum sunlight for carrying out photosynthesis.
5. The stems of young plants are green and prepare food through photosynthesis.

Q2. Draw a leaf and label its parts.

Explain how venation differs in leaves.?

ans: Refer Fig 9.9 Structure of a leaf.

There are two different types of venation

1. In grasses and plants like maize and palms the veins run parallel to each other. This is called parallel venation.
2. Plants like rose, hibiscus and mango have a network of branched veins.

The main vein or veins repeatedly branch to form a network of smaller veins. This venation is called reticulate venation.

Q3. Explain pollination and its types?

Ans: The transfer of pollen from an anther to a stigma is called pollination.

There are two types of pollination

1. When pollination occurs between the anther and stigma of the same plant, it is called self-pollination.
2. When pollination occurs between the anther and stigma of different plants it is called cross-pollination.

Q4. What are seeds? What do they contain and what is their function?

Ans:

Seed is an embryo enclosed inside a tough covering. The seeds contain some stored food in the form of cotyledons. They help in germination of the new plant.

A). Multiple choice Questions

1. a) 2. b) 3. c) 4. a) 5. c) 6. c)
7. c) 8. d) 9. c) 10. c)

B. Fill in the blanks.

1. root and shoot 2. root, absorb
3. Stem 4. rebiculate 5. stomata
6. tendril 7. spines 8. carbondioxide
9. flower, seeds. 10. anther, stigma.

C. True / False

1. T 2. T) 3. T) 4. T 5. F 6. T 7. T 8. T
9. F 10. T.

Lesson No: 10 Topic: Movement in Animals

Short Answer Question.

Q1. Name the organ system that is involved in breathing in human beings.

Ans: Respiratory system is involved in breathing in human beings.

Q2. Name the only moveable bone in the skull?

Ans: The lower jawbone is the only movable bone in the skull.

Q3. Name the two girdles in the human skeleton?

Ans: There are two girdles in the human body, the shoulder girdle or pectoral girdle and the hip girdle or Pelvic girdle.

Q4. Name the bones in the human arm.

Ans. The arm is made up of three long bones – humerus in the upper arm, and ulna and radius in the lower arm.

Q5. What type of joint is present in the knee?

Ans: Hinge joint is present in the knee.

Q6. What is the function of x-rays?

Ans: x-rays make it possible to take special photographs of the bones in the body.

Q7. How many muscles are needed to move a bone in one direction?

Ans: Two muscles are needed to move a bone in one direction.

Q8. What type of skeleton does an earthworm have?

Ans: Earthworm has no skeleton. It has a body that is divided into segments.

Q9. What kind of skeleton does a snail have?

Ans: Snail has a Exoskeleton.

Long Answer Questions:

Q1. Name the main organs and the functions of the nervous system?

Ans: Our nervous system is made up of the brain, spinal cord and the nerves.

The functions of the nervous system:

1. It controls the other organ systems in the body.
2. The brain is the controlling centre of our body. All hollow parts of the brain are filled with a clear fluid which provides protection against jerks and injuries.
3) Spinal cord is protected by the vertebral column or the back bone.

It is responsible for the transfer of information between the brain and the rest of the body.

4). Nerves are bundles of fibre that carry messages to and from the brain and spinal cord and other parts of the body.

Q2. What are the functions of human skeleton?

Ans: Functions of human skeleton:

The skeleton has a very important role in our body.

1). It provides shape and support to our body.

2). It protects the delicate internal organs of the body such as brain, spinal cord, heart, lungs and urinary bladder

3). It allows movement of different parts of the body.

4). The bone marrow produces blood cells.

Q3. Explain the structure of the following and their functions.

i) The rib cage:- It is made up of 12 pairs of curved delicate bones called ribs. The ribs are joined at one end to the backbone and in the front to the sternum. The last two pairs of ribs are joined only to the backbone at the back and are called floating ribs. The rib cage protects the heart and the lungs.

ii) The skull:- The skull is very hard and contains about 22 bones. All bones of the skull are fixed except the lower jaw bone. It is movable and helps us to talk, chew and eat our food. The skull protects the brain.

A. Multiple choice Questions

1. b) 2. d) 3. b) 4. a) 5. c) 6. b) 7. c) 8. a) 9. a) 10. c).

B. Fill in the blanks:

1. Organ system 2. Excretory 3. circulatory 4. Nervous 5. 206, 300 6. Skull 7. femur 8. ribs 9. Gliding 10. hinge.

C. True / False

1. F) 2. T) 3. T) 4. F) 5. F) 6. F) 7. T) 8. F) 9. T) 10. T)

Draw the diagrams and label its parts.

1. The human skeleton [Ref→ Pg no. 107 fig 10.1]
2. Structure of flower [Pg no. 99 fig 9.13]
3. Structure of leaf [Pg no. 95 fig 9.9]
4. Bacterial cell [Pg no. 79 fig 8.2].

Note: 1. Children read lessons carefully and then write Question / Answers on your note book

2.