

Science - 4

Answers

Chapter-1 : Food Making in Plants

- Plants store their extra food in the leaves, stems and roots.
 - Photosynthesis is the process by which plants make their food.
 - croton
- Starch b. Photosynthesis c. Chlorophyll
 - leaf blade e. Stomata f. glucose
- The process by which green plants prepare their own food from water and carbon dioxide in the presence of sunlight is called photosynthesis.
 - The materials used by a leaf to make food are carbon dioxide, water and chlorophyll.
 - Food is used by plants for:
 - their growth (ii) building new cells and
 - repairing worn out cells
 - Mushrooms get their food from the decaying matter.
 - Dodder gets its food from other green plants.
 - Cactus gets its food from its own stem where food is stored.
 - Photosynthesis is the process in which green plants make their own food.
 - The part of the leaf which is flat and green is called leaf blade.
 - A green pigment present in leaves is called chlorophyll.
 - The tip of the leaf is called leaf apex.
 - Small openings present on the lower surface of a leaf are called stomata.
 - Midrib has small tubes that carry water from the roots to the leaves and also carry food to all the other parts of the plant.
 - Roots absorb water and mineral from the soil for the plants.
 - Stomata help in the exchange of gases and water vapours between the leaf and the surrounding air.
 - Chlorophyll makes the leaves green and helps the plant in the process of photosynthesis.
- × b. ✓ c. ✓ d. ✓
- (ii) b. (iii) c. (ii)
- starch b. Eggs c. carbon dioxide

Chapter-2 : Adaptations in Plants

- Insects eating plants are called insectivorous plants.
 - Rosewood and Teak
 - We can make brooms, baskets, mats etc.
- Terrestrial b. Aquatic c. Coniferous
 - cactus; prickly pear e. Mangrove f. Deciduous
- Plants can adapt everywhere. They can adapt on land as well in water. Therefore, plants are found everywhere.
 - Four types of aquatic plants with examples.
 - Free-floating plants-Duckweed (ii) Underwater plants- Pondweed
 - (iii) Fixed plant- Lotus (iv) Emergent plant- cattail
 - Plants that grow on land are called terrestrial plants. For example - Pine, coconut tree, teak and cactus.

- d. We usually find coniferous trees in cold hill places. They are mostly evergreen because they do not shed their leaves in winter.
 - e. Mangroves are those plants that grow in the marshy areas near the seashore.
 - f. A Cactus stores water when it gets. To prevent loss of water its leaves are reduced to spines. way cactus survives in the desert.
4. a. ✓ b. × c. × d. × e. ✓
 f. ✓ g. ✓
5. a. (i) b. (ii) c. (ii) d. (i)
6. a. Aquatic plant b. Terrestrial plant c. Mangrove plant
7. a. (iii) b. (i) c. (iv) d. (ii) e. (vi)
 f. (v) g. (viii) h. (vii)

Chapter-3 : Reproduction in Animals

1. a. The watery white part of an egg is called albumen.
 b. The mother keeps the egg warm by sitting on it. This is called incubation.
 c. The yellow part of the egg is called yolk.
2. a. mammals b. Bat c. Birds d. Spawn e. Tadpole
3. a. The process by which the living beings produce young ones of their own kind is known as reproduction.
 b. For survival on the Earth, each living being has to leave behind one of its own kind otherwise the kind of race would die out. Therefore the animals reproduce.
 c. Animals reproduce by
 (i) giving birth to the young ones.
 (ii) Laying eggs from which young ones hatch out.
- d. The life cycle of a frog has four stages. In the first stage, the eggs covered with jelly are produced. In the second stage, the egg hatches into tadpole. In the third stage, the legs are grown in the tadpole and in the last stage, adult frog is formed.
- e. Mammals take care of their young ones by
 (i) feeding them (ii) cleaning them and
 (iii) Keeping them safe untill they have learnt to look after themselves.
4. a. ✓ b. × c. × d. ✓ e. ×
5. a. (iii) b. (iii) c. (iii)
6. a. Three b. Nymph c. Mammals
7. a. (ii) b. (iv) c. (i) d. (iii)

Chapter-4 : Adaptations in Animals

1. a. Koala, Ape b. Frog breathe through gills and lungs.
 c. Polar bear, seal d. Sleeping period in winter is called winter sleep.
2. a. fur;fat b. gills; lungs c. water ; land d. sleep e. shells
3. a. Adaptation is necessary for protection and to get food for its survival.
 b. Living place of an animal is called habitat. Habitat of animals-air, water, land, etc.
 c. Animals protect themselves by
 (i) adaptation including body coverings and other special parts.
 (ii) Camouflage
- d. Amphiprion and reptiles are generally cold-blooded animals. They cannot bear extreme cold weather. So, they hibernate.

3. a. Milk teeth are also called temporary teeth because near about at the age of six, these teeth start falling.
There are twenty temporary teeth.
- b. Four Kinds of teeth:
Incisors - They help in cutting and biting food.
Canines - They help in gripping and tearing food.
Molars - They help in checking and grinding food.
- c. Structure of tooth:
The hard, white part on the outside of a teeth is called enamel. Below the enamel lies the hard dentin. Dentin is yellow bone-like material which supports the enamel, Inside the dentin is pulp. The pulp forms the central part of the tooth.
4. a. ✓ b. ✗ c. ✓ d. ✗
5. a. (i) b. (i) c. (i) d. (iv)
6. a. Enamel b. Three parts c. thrice
7. a. (iii) b. (iv) c. (v) d. (ii) e. (i)

Chapter-7 : Safety and First-aid

1. a. If we smell or swallow harmful chemicals like nail paints, wall paints etc cause poisoning.
- b. If clothes catch fire, we should stop, drop
- c. (i) Do not play with sharp objects.
(ii) After using the oven, toaster and other cooking appliances turned OFF.
- d. The heart
2. a. Do not b. tetanus c. footpath d. Prevention e. minor
3. a. Safety rules at home:
(i) Do not touch electrical sockets with wet hands.
(ii) Avoid spilling on the floor.
(iii) Do not leave soap bar on the floor. You may slip and get hurt.
(iv) Do not spill detergents or shampoos on the floor. The floor slippery or you may fall down.
- b. A fire can start from a
(i) Lighted match stick that is carelessly thrown away.
(ii) Candle burning near a curtain
- C. Precautions while crossing a road:
(i) Always cross the road from zebra crossing.
(ii) Use subway or over bridge where available to cross the road.
(iii) When there is no zebra crossing, cross the road from a safe place.
- d. First-aid is the quick and correct help given before a doctor arrives when someone is sick or hurt.
For minor burns, dip the burnt part under cold water and for major burns, consult a burn specialist.
- e. (i) Wash the infected area
(ii) Apply some soothing cream
(iii) A soft-pad soaked in ammonia water also gives relief.
(iv) Calamine lotion can be applied to the burning place if itching is there.
- f. Nose bleed
Precautions
(i) Sit upright and press the nose tightly with fingers for 5-10 minutes.

(ii) Use mouth for breathing to avoid swallowing of the blood.

In case a person faints

Precautions

(i) Make the fainted person lie down for sometime

(ii) Keep the head low for the extra blood to reach the brain.

4. a. × b. × c. ✓ d. ✓ e. ×
5. a. (iii) b. (i) c. (iii) d. (iii)
6. a. water b. Fire c. Zebra crossing
7. a. (iii) b. (iv) c. (i) d. (ii)

Chapter-8 : Soil Erosion and Conservation

1. a. Different layers of the soil
(i) Top Soil (ii) Sub Soil (iii) Bed rock
b. The process of the top & soil getting carried away by wind and water is called soil erosion.
c. Four types of soil are gravel soil, sandy soil, clayey soil and loamy soil
d. Loamy Soil
2. a. Soil b. Loamy c. Sandy d. deforestation
e. Soil Conservation
3. a. Soil is a mixture of organic and inorganic matter.
b. Soil is formed from rocks that are the deep layers of the soil.
c. Sandy soil is light and contains a little quantity of organic matter.
d. Loamy soil consist of clay, sand and humus.
It is used for growing plants.
e. Conservation of soil is necessary since it takes hundreds of years for the formation of the top soil.
f. The protection of topsoil from being blown away or washed away is called conservation of soil.
4. a. ✓ b. ✓ c. × d. × e. ✓ f. ×
5. a. (iii) b. (i) c. (iii) d. (iv) e. (i)
6. a. Sandy soil b. Nitrogen c. Dams
7. a. (iv) b. (vi) c. (v) d. (iii) e. (i) f. (ii)

Chapter-9 : Matter and Material

1. a. (i) Freezing is the process in which the liquid is converted into solid form.
(ii) Melting is the process in which ice is converted into liquid on heating.
(iii) Evaporation is the process in which water is converted into vapour on boiling at high temperature.
(iv) Condensation is the process in which water vapour changes back into water on cooling.
(v) Sublimation is the process in which a solid directly turns into the gaseous form on heating.
2. a. Space, weight b. atoms c. molecule d. solid, liquid and gas
3. b. Objects that occupy space and have weight are called matter.
c. Matters occupy space
c. Molecules are arranged very closely to each other in solid.
d. Water exists in all three forms i.e. solid, liquid and gas. When there is a change in temperature, one state of water can be changed into another state.

4. a. ✓ b. ✗ c. ✓ d. ✓ e. ✗
 5. a. (iv) b. (iv) c. (iii) d. (i)
 6. a. Matter b. Solid c. Iodine d. Carbon dioxide
 e. Sound
 7. a. (ii) b. (v) c. (iv) d. (i) e. (iii)

Chapter-10 : Air: Water and Weather

1. a. By boiling b. From sea to land c. Filtration
 2. a. Earth b. rotation c. humidity d. water e. breeze
 f. germs
 3. a. Days and nights are formed by the rotation of the earth on its own axis.
 b. Revolution of the earth makes a change of season.
 c. The heat of the sun, heats up the air, the air becomes light in air and starts moving from one place to another.
 d. The heat of the sun transforms water to water vapours by a process, called evaporation.
 e. Rain water, No. When rain water comes in contact with air and other things, it becomes impure. So, it is not used for drinking.
4. a. ✗ b. ✓ c. ✗ d. ✓ e. ✓
 5. a. (i) b. (ii) c. (iii) d. (iii)
 6. a. chlorination b. Water cycle c. wind
 7. a. (ii) b. (iii) c. (i) d. (v) e. (iv)

Chapter-11 : Our Environment

1. a. Pollution is the contamination of the environment with harmful substances.
 b. Three
 c. The hole in the ozone layer made by the chemical is called ozone hole.
2. a. green house effect b. Dyes; fertilizers c. harmful gases d. ozone
 e. vision f. air g. landfills h. gases;dust
3. a. Pollution is the result of our failure to balance our needs and wants with that of nature.
 b. We have polluted the air by the smoke released from burning fuels in automobiles or in factories.
 We have polluted soil by domestic waste, industrial waste, pesticides, insecticides etc.
 c. The carbon dioxide gas attracts the sun's heat and does not allow it to escape. This trapped heat warms the surface of the earth called Global Warming.
 d. Climatic changes :
 (i) It has happened for the first time in Saudi Arabia.
 (ii) In cold Siberia, summer has come three months earlier.
 (iii) Widespread floods in Europe and heavy snowfall in Kashmir.
 e. (i) Avoid Throwing waste, chemical, soaps etc. into lakes and rivers.
 f. Acids present in air come into the earth with rain. This is called acid rain.

Acid rain harms wildlife, building surfaces and soil.

4. a. ✗ b. ✓ c. ✗ d. ✓ e. ✓
 5. a. (iv) b. (iv) c. (iii) d. (iii)
 6. a. Global Warming b. ozone c. Saudi Arabia
 7. a. (v) b. (i) c. (v) d. (ii) e. (iv)

Chapter-12 : Sun, Planets and Stars

- Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.
 - Satellites launched by man are called artificial satellites.
 - Vast explosion of a universe is called big bang.
 - Planting more trees
- sputnik-1
 - constellations
 - Sun
 - orbit
 - morning star
- Mercury
 - Constellation
 - The Sun and the eight planets which revolve around it, together form the solar system.
- ✓
 - ✗
 - ✗
 - ✗
 - ✓
- (i)
 - (i)
 - (ii)
 - (ii)
 - (iii)
- Sun
 - Sun
 - Moon
 - Venus
- (iv)
 - (iii)
 - (iv)
 - (v)
 - (i)
 - (ii)

Chapter- 13 : Work, force and Energy

- A Wedge is a simple machine with at least one slanting surface ending in a sharp edge. Eng. Axe
 - Energy is the ability to do work
 - The force that pulls an object towards the centre of the Earth is called gravity.
- force
 - more
 - machines
 - wind
 - lever
- a pull or a push acting on an object is called force. It is necessary to move objects or change their shapes.
 - Wind energy is used to produce electricity.
 - The force that slows down or stops a moving object is called force of friction. It is useful in stopping vehicles by applying brakes. Frictional force also helps us to work.
 - Work is done only when an object moves over a distance on applying force.
 - Wheel and Axle is found in car. The Wheels have a rod connected to it. This rod is called the Axle. the Axle moves the wheel.
- ✗
 - ✗
 - ✗
 - ✓
 - ✓
 - ✓
- (iv)
 - (iv)
 - (i)
 - (iii)
- gravitational force
 - frictional force
 - Lever
 - sun
 - energy
- (ii)
 - (v)
 - (iv)
 - (iii)
 - (i)

Chapter- 14 : Measurement

- Dress and Curtain.
 - Mass is the measure of amount of matter in a body.
 - Capacity is the measure of amount of liquid a container can hold.
- metres
 - dozens
 - litres
 - milli metres
 - kilo grams
- ₹ 60
 - Potato costs = ₹ 25, ₹ 25
 - ₹ 360
 - 175 chapatis
- ✗
 - ✓
 - ✗
 - ✗
- (ii)
 - (iii)
 - (ii)
 - (i)
- Yards
 - Mile
 - Millimetre
 - Weighing machine
- (iii)
 - (i)
 - (ii)