L - 1: REPRODUCTION IN PLANTS

QUICK CHECK (Pg. No. 6)

State true or false:

1. True
2. False - The monocot plants have seeds with one cotyledon.
3. False - Seeds that have hair are dispersed by wind.
4. False - Air, water and warmth are the three essential conditions for seed germination
5. True

QUICK CHECK (Pg. No. 9)

Match the columns:

1. Stem cutting - Rose
2. Tubers - Sweet potato
3. Spores - Ferns
4. Rabi crop - Wheat
5. Kharif crop - Maize

TEST MATCH

PRACTICE TEST - 1: (Pg. No. 14 - 15)

A. Tick (✓) the correct answers:

1. (d) bryophyllum 2. (b) cotyledons 3. (b) air, water and warmth 4.(c) Xanthium

B. Give two examples of each:

1. Geranium, balsam 2. Cotton, dandelion 3. Barley, mustard 4. Rice, bajra

C. Fill in the blanks:

1. agriculture 2. Potato, ginger 3. caterpillars, locusts 4. Bacteria, viruses

D. Match the columns:

1. Ploughing - Loosening soil
2. Manuring - Adding compost
3. Sowing - Scattering seeds
4. Irrigation - Watering field
5. Harvesting - Gathering crops
6. Threshing - Collecting grains

E. Complete the given analogy:

1. Rice : Kharif : : Mustard : Rabi
2. Lotus seeds : Water : : Mango : Animals
3. Dry seeds : Wrinkled seed coat : : Soaked seeds : Smooth seed coat
4. Rice : Monocot : : Pea : Dicot
5. Sowing : Seeds : : Irrigation : Water

PRACTICE TEST - 2 (Pg. No. 15 - 16)

A. Tick (✓) the correct answers:

1. (a) irrigation 2.(a) wind 3. (b) spores 4. (c) Tubers

Picture based questions : (Pg. No- 16)

Given below are the pictures of some flowers along with their names. Mention their plant parts through which reproduction takes place in them:

1. Geranium - root or seed
2. Morning glory - seed or stem
3. Marigold - seed
4. Petunia - seed
5. Iris - stem
6. Violet - seed
7. Hibiscus - seed or stem
8. Dahlia - seed
9. Lily - seed
10. Rose - stem
11. Fern - spores

Short Answer Type Questions:

Q1. What is germination?

Ans. The process by which a seed develops into a seedling is called germination.

Q2. Why do farmers use insecticides and pesticides?

Ans. Farmers use insecticides and pesticides to kill insects and pest to prevent bacterial and viral growth.

Q3. What are dicot and monocot plants?

Ans. Plants having seeds with one cotyledon are called monocot plants. eg.- rice, wheat etc.
Plants having seed with two cotyledons are called dicot plants. eg.- bean, pea etc.

Q4. Define : (a) Crops (b) Stem cutting

Ans. a) Crops : Plants grown on a large scale for food and other things are called crops.

b) Stem Cutting : It is a method of growing new plants from the stem segment of a parent plant e.g. – Rose, Sugarcane, Cactus etc.

Q5. Differentiate between kharif and rabi crops. Give two examples of each.

Ans.

Kharif Crops	Rabi Crops
a) The crops which are grown in monsoon season (July to October) are known as kharif crops. b) These crops are harvested in autumn season. c) Rice, bajra, jowar are kharif crops.	a) The crops which are grown in winter season (October to March) are known as rabi crops. b) These crops are harvested in spring season. c) Wheat, barley and mustard are rabi crops.

Q6. Why is seed dispersal necessary?

Ans. Seed dispersal is necessary for plant survival. It allows plants to spread out and avoid competing with each other for resources like water, sunlight and nutrients.

Q7. Why will a seed submerged in water not germinate?

Ans. Seed submerged in water do get air and warmth. In the absence of oxygen from the air, the seeds will not obtain energy from cotyledons. In absence of warmth, the embryo remain inactive to grow.

Q8. Why should only good quality seeds be sown?

Ans. Damaged seeds fail to germinate and due to this less crop will be produced. So to increase production good quality seeds should be sown.

Q9. What are the agents of seed dispersal? Explain their modes of seed dispersal.

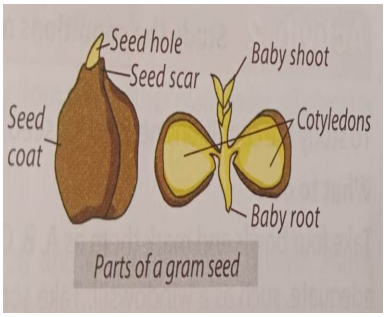
Ans. The medium through which a seed scattered away from the parent plant is called agent of seed dispersal. Wind, water, animals and explosion are the modes or agents of seed dispersal.

Q10. Write down the functions of cotyledons during seed germination.

Ans. 1. It protects the embryo.
2. It stores food for the baby plant.

Long Answer Type Questions:

Q1. Draw a well-labelled diagram of a seed and describe its different parts.



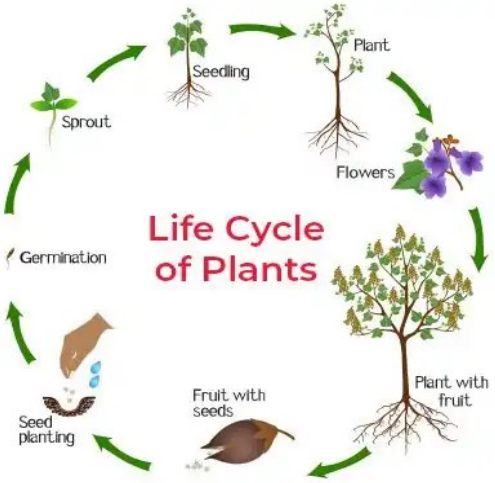
1. **Seed coat** : The outer protective covering of the seed is called seed coat.
2. **Small opening** : Through it water enters the seed.
3. **Scar** : It is a point where seed attaches to the fruit.
4. **Embryo** : It is the baby plant inside the seed. It has tiny shoot called plumule and a tiny root called radicle.
5. **Cotyledons** : The leaf that provides food to baby plant is called cotyledon.

Q2. Define agriculture. Name the stages involved in the agricultural practice.

Ans. The practice of growing crops on a large scale for the purpose of getting food and other things is called agriculture. Following stages are involved in agriculture:

1. Ploughing
2. Manuring
3. Sowing
4. Irrigation
5. Protecting the crops
6. Harvesting
7. Threshing
8. Winnowing
9. Storing
10. Transporting

Activity – Draw a well-labelled diagram of life cycle of plants.



L - 7: MATTER

QUICK CHECK (Pg. No. - 93)

Name them :

1. Molecule 2. Solid 3. Evaporation 4. Dilute solution 5. Atom

TEST MATCH

PRACTICE TEST – 1 (Pg No. 96 - 97)

A. Tick (✓) the correct answers:

1. (c) Rusting of Iron 2. (b) Atom 3. (c) saturated 4. (c) gas 5. (c) freezing

B. State true or false:

1. False - A physical change can be reversed.
2. True
3. False - In a mixture, substances do not undergo change in their chemical properties, instead they show physical changes.
4. True

C. Match the columns:

1. Solute - A substance to be dissolved in solvent
2. Melting - Changing of solid into liquid
3. Sublimation - Changing of solid into gas
4. Element - Formed from atoms of same kind
5. Condensation - Changing of gas into liquid
6. Compound - Formed from atoms of different kinds

PRACTICE TEST - 2 (Pg. No. 97)

A. Tick (✓) the correct answers:

1. (d) All of these 2. (a) Burning of Paper 3. (c) Melting 4. (a) Solid

Picture based questions: (Pg. No. – 98)

Observe the arrangement of molecules of the given three states of matter. Identify the processes P, Q, R, S and T that can change the states of matter.

P - Sublimation
Q - Evaporation
R - Condensation
S - Melting
T - Freezing

Short Answer Type Questions :

Q1. What is a matter?

Ans. Anything that occupies space and has mass is called matter.

Q2. What is a saturated solution?

Ans. A solution that has maximum amount of solute dissolved in it is called saturated solution.

Q3. What is a molecule?

Ans. Molecule is the smallest unit of an element or a compound. It retains all the properties of that element or compound.

Q4. Write the difference between a solution and a mixture.

Ans. The difference between a solution and mixture are

Solution	Mixture
A mixture in which all substances are mixed evenly is called a solution. e.g. – sugar syrup	A mixture is a combination of two or more substances and each substance retain its own properties. e.g. – air

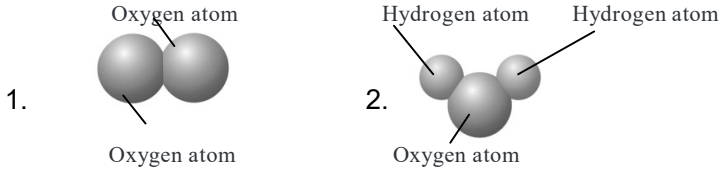
Q5. Write two differences between physical change and chemical change. Give an example of each.

Ans. Differences between physical change and chemical change are:

Physical Change	Chemical Change
1. Physical change is a change in the form or state of matter.	1. Chemical change is a change that results in the formation of a new substance with different properties.
2. It can be reversed.	2. It cannot be reserved.
3. e.g. : melting chocolate, cutting of wood etc.	3. e.g. : burning of paper, frying egg etc.

Q6. Draw labelled diagrams of element and compound to describe them.

Ans.



Oxygen : Element **Water : Compound**

Element is formed by the atoms of same kind. In 1st picture two atoms of oxygen together formed an element. Compound is formed by the atoms of different kinds. In 2nd picture two atoms of hydrogen and one atom of oxygen formed a compound called water.

Q7. Why does a painter remove varnish paint from his hands by turpentine oil instead of water?

Ans. Painter removes varnish paint from his hands by turpentine oil instead of water because these paints can dissolve in turpentine oil but not in water. Water and paint are immiscible liquids whereas turpentine oil and paint are miscible liquids.

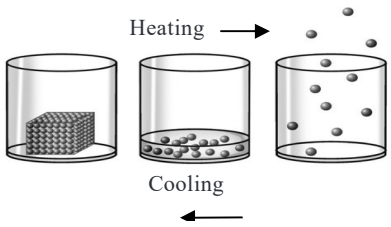
Q8. How do aquatic life survive under a frozen lake during winter?

Ans. Only the top layer of the lake or river freezes during winter. Underneath the frozen upper layer, the water remains in liquid form and does not freeze. Also the oxygen is trapped beneath the layer of ice. So, the aquatic life can survive in the frozen water.

Long Answer Type Questions:

Q1. How do heating and cooling change the arrangement of molecules in matter? Explain with a diagram.

Ans. Matter changes from one state to another on heating and cooling. With the change of state the arrangement of molecules also change. On heating the attraction between molecules is broken and molecules move away. On cooling attraction between molecules increases and they come close to each other. This can be shown through the given diagram.



2. Write the characteristic features of solid, liquid and gas.

Ans. Characteristics features of solid, liquid and gas are:

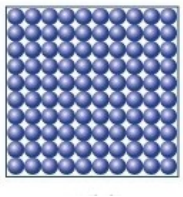
Solid	Liquid	Gas
1. Solids have definite shape and volume.	1. Liquids have no fixed shape but definite volume.	1. Gases have no fixed shape and no fixed volume.
2. In solids, molecules are closely packed.	2. In liquids, molecules are loosely packed.	2. In gas, molecules are far apart from each other.
3. In solids, force of attraction between molecules is very strong.	3. In liquids, force of attraction between molecules is weak.	3. In gas, force of attraction between molecules is very weak.
4. Solids can't flow.	4. Liquids flow from higher to lower level.	4. Gases can flow in all directions.
5. e.g. – table, chair, salt etc.	5. e.g. – water, milk, oil etc.	5. e.g. – oxygen, nitrogen, carbon dioxide etc.

3. Describe the processes involved in changing the states of matter.

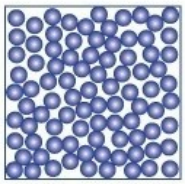
Ans. Following processes are involved in the changing states of matter:

1. Melting : Solid converts into liquid .e.g.- ice into water
2. Evaporation : Liquid converts into vapours. e.g.- water into steam
3. Sublimation : Solid converts into gas. e.g. - Naphthalene balls into gas.
4. Condensation : Vapours convert into liquid. e.g. – steam into water droplets
5. Freezing : Liquid converts into a solid. e.g. – Water into ice

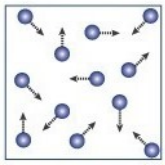
ACTIVITY : Draw a diagram to show arrangements to molecules in different states of matter.



Solid (Tightly Packed)



Liquid(Loosely Packed)



Gas (Very loosely Packed)

L - 9: SIMPLE MACHINES

QUICK CHECK (Pg. No. - 125)

Match the columns:

1. Frictional force	-	Helps us to walk
2. First class lever	-	Lifts heaving things
3. Gravitational potential energy	-	Depends on height and weight
4. Wheel and axle	-	Reduces friction
5. Inclined plane	-	Roads in mountains

TEST MATCH

PRACTICE TEST – 1 (Pg. No.128)

A. Tick (✓) the correct answers:

1. (a) Scissors 2. (a) Fixed Pulley 3. (c) Bicycle & Crane 4. (c) load 5. (b) Frictional

B. Fill in the blanks:

1. fulcrum 2. direction of applied force (effort) 3. Movable
4. electrostatic 5. wheel and axle

C. Circle the odd one out:

1. Chemical energy - All three are kinetic energy (show movement of energy) while chemical energy is stored energy.
2. Tongs - All three are second class lever while tongs is third class lever.
3. Frictional force - All three forces are non-contact forces while frictional force is a contact force.
4. Axle - All these three are not simple machines while axle is a simple machine.
5. Pulley - All three are forms of inclined plane while pulley is a separate type of simple machine.

D. Which of the two paths (A or B) would you take to move up the mountain? Why?

Ans. Path A would be easy to move up the mountain because path A is a sloping or slanting that makes the walk easy. Walking on path A requires lesser effort.

PRACTICE TEST - 2 (Pg. No. 129)

A. Tick (✓) the correct answers:

1. (b) Light 2. (d) Both b & c 3. (c) Pulley 4. (a) Stapler 5. (a) rough surface

Picture based questions : (Pg. No - 131)

1. Lever 2. Pulley 3. Wedge 4. Inclined plane
5. Wheel 6. Screw 7. Axle 8. Axle

Short Answer Type Questions:

Q1. What is a simple machine?

Ans. Simple machine is a device that helps us to do work easily and efficiently.

Q2. Name the different types of forces.

Ans. There are two types of forces.

1. Contact forces - Muscular and frictional force.
2. Non-contact forces - Magnetic, electrostatic and gravitational force.

Q3. What is the cause of friction?

Ans. Friction is caused due to the roughness of the two surfaces in contact.

Q4. Name seven kinds of simple machines.

Ans. Seven types of simple machines are: lever, inclined plane, pulley, screw, wheel and axle, gears and wedge.

Q5. Differentiate between a fixed pulley and a moveable pulley.

Ans. Differences between the fixed pulley and moveable pulley are:

Fixed Pulley	Movable pulley
1. It changes the direction of force.	1. It does not change the direction of force.
2. The effort and load move in the opposite direction.	2. The effort and load move in the same direction.
3. The distance moved by the load is the same as the distance moved by the effort.	**3.** The distance moved by the effort is about twice the distance moved by the load.

Q6. Give two examples of each:

(a) First Class lever : Scissors, pliers and claw hammer
(b) Inclined plane : Hospital ramp, staircase and loading ramp
(c) Wheel and axle : Car steering, screw driver and bicycle pedal

Q7. How are both screw and wedge inclined plane?

Ans. Both screw and wedge have sloping or slanting surface like inclined plane. This surface makes it easy to push, pull and roll heavy loads. Wedge is formed of two inclined planes that are combined together. Screw is a inclined plane wrapped around a pole.

Q8. When wheel turns, the axle turns. This suggests when axle turns, the wheel will also turn. Find an application of later in your home.

Ans. The application when axle turns, the wheel will also turn can be seen in case of fan. In fan when the axle (the rod of fan) turns, the wheel (3 arms of a fan) also rotates.

Q9. Which energy form – potential or kinetic, is more susceptible to get exhausted in future?

Ans.: Potential energy depends upon the gravitational force of the earth whereas kinetic energy of vehicle depends upon the fossil fuel. So it is limited and will be exhausted in near future.

Q10. What is the energy? Name any four types of energy.

Ans.: The ability to do work is called energy. We cannot see energy but its effects can be seen. Different types of energy are: gravitational energy, electrical energy, chemical energy, sound energy, nuclear energy, light energy, elastic energy and wind energy.

Long Answer Type Questions:

Q1. What is the lever? Describe its three classes.

Ans. A lever is a rigid rod which is free to move about a fixed point. In lever, the fixed point is called fulcrum. The force applied is effort and the object to be lifted is load. There are three kinds of lever:

First class lever : Fulcrum lies between the load and the effort in first class lever. e.g. sea saw, scissors etc.

Second Class Lever : The load lies between the fulcrum and the effort in second class lever. e.g. bottle opener, wheel barrow etc.

Third class lever : In this lever, effort lies in between the fulcrum and the load. e.g. ice tongs, fishing rod etc.

Q2. Describe the working of the following simple machines:

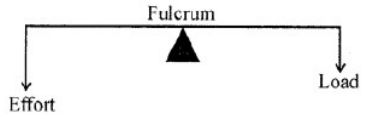
Ans. (a) **Pulley:** It is a grooved wheel which can turn around freely. A long piece of rope is passed over the groove in the centre of the wheel. Pulley works more conveniently by changing the direction of force.

(b) **Wheel and axle :** It is made up of a large wheel connected to a rod called axle. It is simple to use, as it reduces the friction and makes it to use. When the wheel turns, the axle also turns.

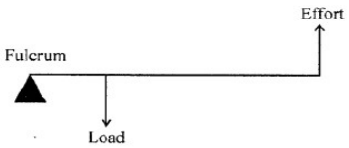
(c) **Inclined plane:** It is a slanted surface or sloping surface that makes easy to move load with less efforts. This surface makes it easy to pull, push or roll heavy loads.

ACTIVITY : Draw a diagram to show position of fulcrum in different types of lever.

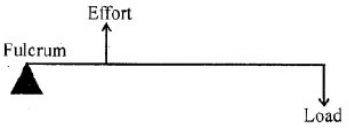
First class



Second class



Third class



L – 3 : BONES AND MUSCLES

QUICK CHECK (Pg. No. - 39)

Fill in the blanks:

1. Gliding joint 2. Humerus 3. Joint 4. Cranial 5. 206

TEST MATCH

PRACTICE TEST – 1 : (Pg. No.42)

A. Tick (✓) the correct answers:

1. (d) Backbone 2. (a) true ribs 3. (b) humerus 4. (c) pivot 5. (b) facial

B. State true or false:

1. False – Muscles are connected to bones by tendon.
2. False – Skeletal muscles are voluntary muscles.
3. True
4. True
5. False – Pelvic gridle protects developing baby in a pregnant woman.
6. False – Our wrists and ankle have gliding joints.

C. Match the columns:

1. Cardiac muscles – Heart muscles
2. Hinge joint - Elbow and knee
3. Cartilage – Ear and nose
4. Back bone – Spinal cord
5. Brain box – Cranial bones
6. Ligament – Bone to bone

D. Complete this cross word with the help of the clues given:

Down: 1. Cardiac 2. Skeleton 3. Ligament 4. Vertebra
Across: 5. Pelvic 6. Femur 7. Sternum 8. Hinge 9. Voluntary

PRACTICE TEST-2 (Pg. No. 44)

A. Tick (✓) the correct answers:

1. (c) ears 2. (c) atlas 3. (b) Ball & Socket 4. (b) Pectoral Girdle
5.(a) Smooth

Picture based questions: (Pg. No. -45)

1. Gliding joint 2. Pivot joint 3. Hinge joint 4. Ball and socket joint

Very Short Answer Type Questions:

Q1. Name two organs protected by rib cage.

Ans. The organs protected by the rib- cage are lungs, heart and kidneys.

Q2. Name the parts of our skeletal system.

Ans. The human skeleton consists of skull, backbone ribcage and two pairs of limbs and girdles.

Q3. Name the longest bone of our body.

Ans. Femur is the longest bone of our body. It is also called thigh bone. It is present in hind limb.

Q4. Which part of our skull has a movable joint?

Ans. Lower jaw is a movable joint of skull.

Short Answer type Questions:

Q1. What is a cartilage?

Ans. Cartilage is a strong and flexible tissue present between the joints. It reduces friction and acts as a shock absorber.

Q2. Write the differences between ligament and tendon.

Ans. The differences between ligament and tendon are:

Ligament	Tendon
1. It is a strong and slightly elastic tissue.	1. It is a stretchy tissue.
2. It binds a bone to another bone.	2. It attaches muscles to bones.
3. It prevents the bone dislocation.	3. It helps in movement of muscles and bones together.

Q3. Define voluntary and involuntary muscles. Give examples of each.

Ans. **Voluntary muscles:** The muscles which are under our control are called voluntary muscles. E.g.- muscles of arms, legs, hands etc.

Involuntary muscles: The muscles which are not under our control are known as involuntary muscles. e.g.- muscles of stomach, intestine etc.

Q4. What is a joint? Name four movable joints with examples.

Ans. Joint is a structure where two or more bones are connected. Joints can be movable or immovable. Four movable joints are:

1. Ball-and-socket joint: hip and shoulder joints.
2. Hinge joint: elbow, knee
3. Pivot joint : the skull and first two vertebrae of the backbone.
4. Gliding joint: wrist and ankle.

Q5. Why do muscles grow larger and stronger in weightlifters?

Ans.: Muscles grow larger and stronger in weight lifters as they do regular exercise and consume protein rich food for proper development of muscles.

Q6. Can you increase or decrease the pumping action of your heart?

Ans. No, we cannot increase or decrease the pumping action of heart because the cardiac muscles are not under our control. They are involuntary muscles.

Q7. Why are aged people more prone to bone fractures?

Ans. Aged people are more prone to bone fractures because with age, people lose bone mass. The bones lose calcium and other minerals with the age.

Q8. Is there any difference in the size of pelvic girdle of men or women?

Ans. Yes, there is a difference in the size of pelvic girdle of men or women. Women's pelvic girdles are broader and bigger than men's pelvic girdles.

Q9. Why do muscles work in a pair? Explain with an example.

Ans. Bones move at the joints by contraction and relaxation of muscles attached to them. Muscles on contracting can only pull the bones not push. So they always work in the pair. E.g. biceps and triceps work against each other to bend the arm up and down.

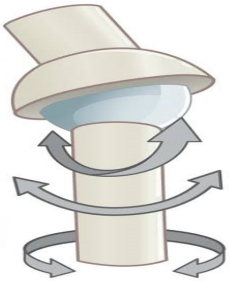
Long Answer Type Questions:

Q1. Write the functions of our skeletal system.

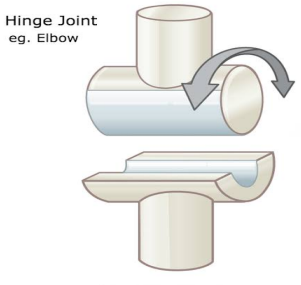
Ans. Following are the functions of skeletal system:

1. Skeletal system gives shape and support to the body.
2. It protects the delicate internal organs like brain, heart, lungs etc.
3. It provides movement to our body parts with the help of muscles.
4. Bones also store minerals like calcium and phosphorus.
5. Bones contain bone marrow, which forms the blood cells.

Q2. Describe the structure of ball-and- socket and hinge joints with the help of labelled diagrams.



Ans. **Ball and socket joint:** In this joint, the end of one bone is rounded as a ball which fits into a socket in the other bone. The bone with ball-like head freely moves in all directions



Hinge Joint: These joints allows only back and forth movement and no rotation. e.g.- elbows, knees, ankles etc.

Q3. Write the functions of pectoral and pelvic girdles.

Ans. The pectoral girdle is shoulder girdle. It is present in forelimb. The functions of pectoral girdle are:

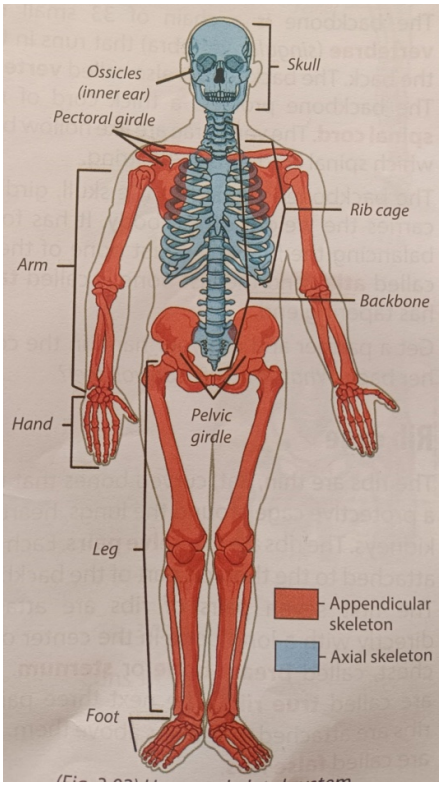
1. It provides connection between forelimbs with the skeleton.

2. It provides attachment point for many muscles which allow the movement of shoulder and elbow joint

Pelvic girdle is hip girdle. It is present in hind limb. The functions of pelvic girdle are:

1. It supports the weight of the body.
2. It protects organs, such as urinary bladder and reproductive organs.
3. It protects the developing baby in a pregnant woman.

ACTIVITY : Label the parts of skeletal system.



L - 11 : SUN, MOON AND PLANETS

QUICK CHECK : (Pg. No. – 155)

Match the column:

1. Core	-	Iron and nickel
2. Asteroid belt	-	Between Mars and Jupiter
3. Mars	-	Rusted iron dust
4. Solar energy	-	Nuclear fusion of hydrogen
5. Venus	-	Hottest planet

Test Match

PRACTICE TEST – 1: (Pg. No. 160)

A. Tick (✓) the correct answers:

1. (d) Earth 2. (d) Uranus 3. (d) Gibbous Moon 4. (a) Crust 5. (b) Neil Armstrong

B. Name them:

1. Asteroid belt 2. Oceanic crust 3. Inner planets 4. Mars 5. Craters

C. State true or false:

1. True
2. True
3. False - Moon's gravity is one sixth of the earth.
4. False - The full lighted moon is called full moon.
5. True
6. True

D. Fill in the blanks:

1. Nuclear fusion 2. Rays 3. Jupiter 4. Mantle 5. Apollo 11

E. Circle the odd one out:

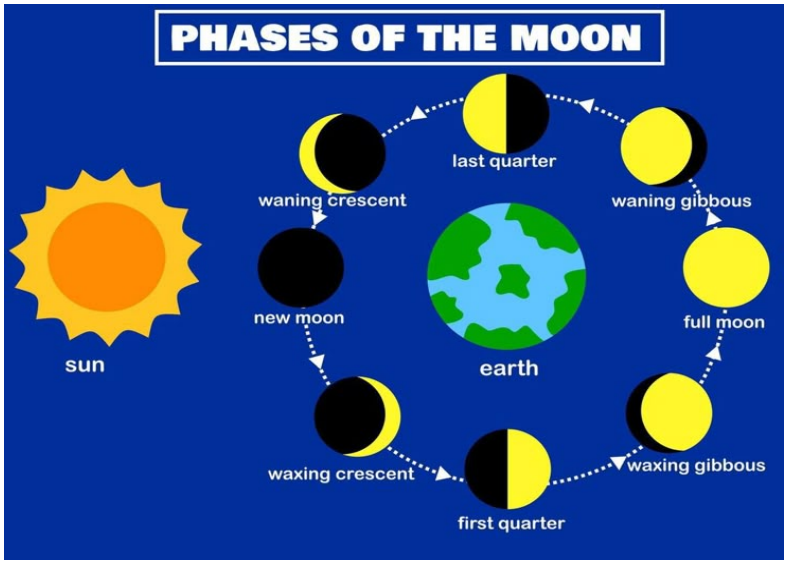
1. Saturn - All the three are inner planets while Saturn is outer planets.
2. Moon - All the three are planets while moon is a natural satellite of the earth.
3. Corona - All the three are layers of the earth while corona is a layer of the sun.
4. Mars - All the three are made up of gases while mars is made up of rocks.
5. Solar eclipse - All the three are phases of moon while solar eclipse is not.

PRACTICE TEST – 2 : (Pg. No. – 162)

A. Tick (✓) the correct answers:

1. (a) Crust 2. (b) Jupiter 3. (c) sun 4. (c) one-sixth 5. (d) earth

Picture based questions : (Pg. No. 163)



Short Answer Type Questions:

Q1. What is a natural satellite? Give one example.

Ans. Natural satellite is a celestial body that orbits around a planet. Moon is the natural satellite of the Earth.

Q2. What is solar eclipse?

Ans. Solar eclipse is a phenomenon when the moon comes between the sun and the earth. The moon casts its shadow on the earth.

Q3. What is new moon?

Ans. New moon is a phase of the moon when the moon is between the earth and the sun. The side of the moon facing the earth is not lighted up by the sun.

Q4. Differentiate between total lunar eclipse and partial lunar eclipse.

Ans. **Total Lunar Eclipse -** When the moon is completely hidden by the shadow of the earth, it is called total lunar eclipse.

Partial Lunar Eclipse - When some part of the moon can be seen during eclipse, it is called partial lunar eclipse.

Q5. Why is moon a silent place?

Ans. Moon is a silent place because no sound can be heard there. Sound needs a medium (like air, water or solid) to travel. Since air (or other medium) is not present on the moon, it is a silent place.

Q6. What are different phases of moon?

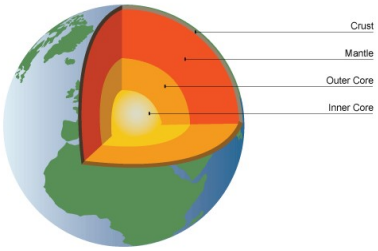
Ans. Different phases of moon are New Moon, Crescent Moon, Half Moon, Gibbous Moon and Full Moon.

Q7. How is life possible on the Earth?

Ans. Life is possible on the Earth because it is at the right distance from the sun and has a protective atmosphere and the necessary ingredients like water, air etc.

Q8. Describe the surface of the moon.

Ans. The surface of the moon appears uneven. The crust of the moon is covered with the thick layer of dust. The moon has mountains and huge round depressions.



Q9. How are artificial satellites useful to us?

Ans. Artificial satellites are used for weather forecasting, communication, navigation, scientific research and defence.

Long Answer Type Questions:

Q1. With the help of a well-labelled diagram, describe the internal structure of the Earth.

Ans. Earth is made up of three layers crust, mantle, and core.

Crust: It is the outermost layer of the Earth. It is rocky and brittle and broken pieces called plates. Crust forms continent and oceanic floors.

Mantle: This layer is below the crust. It is the thickest layer of the Earth. It extends to a depth of 2900 km. The upper part of the layer is made up of solid rocks while lower part consist of molten rocks (magma).

Core: It forms the centre of the Earth. The outer core is hot so it is in the molten state. The inner core contains iron and nickel with some sulphur also.

Q2. Give any five differences between inner planets and outer planets.

Ans.

Inner planets	Outer planets
1. Mercury, Venus, Earth and Mars are the inner planets.	1. Jupiter, Saturn, Uranus and Neptune are outer planets.
2. They are made of rocks and have solid surface.	2. They are balls of gases with no solid surface.
3. They spin or rotate slowly.	3. They spin or rotate quickly.
4. They are small in size.	4. They are huge in size.
5. They are heavy and condensed.	5. They are light for their sizes.

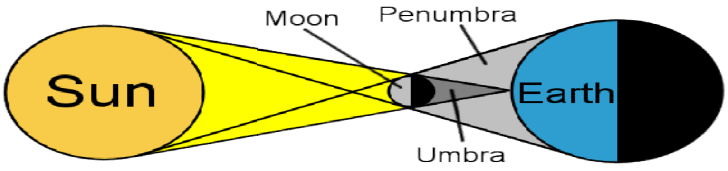
Q3. Discuss the conditions on the moon.

Ans. The conditions on the moon are as under:

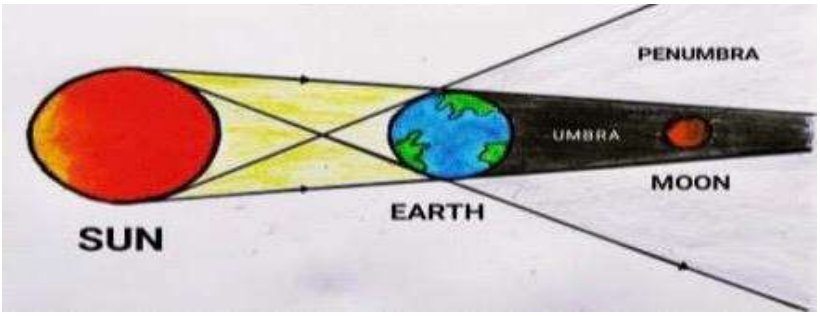
1. The moon has no air and water.
2. It can not reflect or retain the heat of the sun.
3. No life exists on the moon due to absence of water and air.
4. The force of gravity of the moon is one sixth of the earth's gravity.

Activity : Draw well-labeled diagrams of :

a) Solar Eclipse

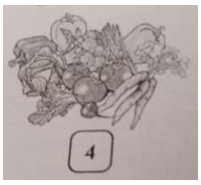


b) Lunar Eclipse

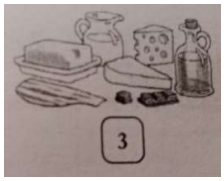


L - 5 : NUTRITION AND HEALTH

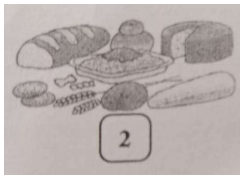
QUICK CHECK (Pg. No. - 62)



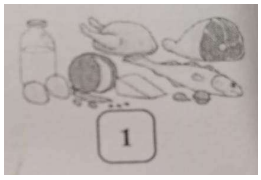
Roughage
Vitamins and Minerals



Fats



Carbohydrates



Proteins

TEST MATCH

PRACTICE TEST -1 : (Pg. No. 67 - 69)

A. Tick the correct answer:

1. (d) Fat 2. (b) Protein 3. (d) All of these 4. (c) Scurvy 5. (a) insects

B. Match the columns:

1. b – Q 2. d-R 3. e – T 4. f – S 5. c – P 6. a – U

C. State true or false:

1. True
2. False - A balanced diet contains all the nutrients in the correct amount.
3. True
4. False - A contagious disease spread from one person to another.
5. False - Anaemia is a deficiency disease.

D. Circle the odd one out:

1. Chocolates - All three are body building nutrients while chocolates is energy giving nutrient.
2. Curd - All three are rich in carbohydrates while curd is rich in protein.
3. Orange – All the three are good to cure anemia where as orange is useful to cure scurvy.
4. Goitre – All three are diseases caused by deficiency of vitamins while goiter is caused by deficiency of mineral (iron).
5. Allergy – All three are communicable diseases where as allergy is non-communicable.

PRACTICE TEST-2 (Pg. No. 70)

A. Tick the correct answer:

1. (c) anaemia 2.(a) Chickenpox 3.(a) Milk 4. (b) Plague 5. (d) all of these

Picture based questions (Pg. No. 71)

1. Lack of Vitamin C – Citrus fruits and green vegetables
2. Lack of Iodine - Iodised salt and fish
3. Excessive intake of high caloric food – Less calory food
4. Lack of Vitamin D - Milk and milk products

Very Short Answer Type Questions:

Q1. Name two non-communicable diseases.

Ans. Scurvy and night blindness are two non-communicable diseases.

Q2. Name two body-building foods.

Ans. Eggs and milk are body building food.

Q3. Why should we exercise and take proper rest?

Ans. We should exercise and take proper rest to keep our body fit and healthy.

Short Answer Type Questions:

Q1. What is a balanced diet?

Ans**.** A diet that contains all the nutrients in the correct amount is called balanced diet.

Q2. What are deficiency diseases?

Ans**.** The diseases caused due to the lack of vitamins and minerals in the body are called deficiency Diseases. e.g. – anaemia, night blindness etc.

Q3. What are nutrients? Name the main nutrients present in our food.

Ans**.** The substances present in the food which are essential for our body are called nutrients. The main nutrients in our food are:

1. **Carbohydrates :** rice, potato, bread, corn, wheat etc.
2. **Proteins** : eggs, soyabean, milk, cheese and pluses etc.

3. **Fats :** butter, cheese, cream etc.
4. **Vitamins :** fruits and vegetables
5. **Minerals :** fruits, vegetables, salt etc.

Q4. Briefly describe the different modes of transmission of communicable diseases.

Ans**.** Different modes of transmission of communicable diseases are air, contaminated food, direct or indirect contact and insects.

Q5. Why are roughage and water necessary for us?

Ans. Roughage and water are essential for our body. Roughage is the fibres that are not digested in our body They adds bulk to the undigested food and keeps the intestine in shape. Water helps to remove waste from our body through sweat and urine.

Q6. Aditya is suffering from common cold. Doctor advised him to take leave from the school. Can you explain the reason.

Ans. As common cold is a communicable disease. Doctor advised him to take leave so that other students may not get infected.

Q7. It is believed by some people that vegetarian diet lack protein. Is it correct? Justify your answer.

Ans. No it is not right. They may take pulses, soyabean etc. which are rich sources of proteins.

Q8. Describe any four deficiency diseases, their causes and symptoms?

Deficiency Disease	Cause	Symptoms
Night Blindness	Lack of Vitamin A	Poor vision, loss of vision in darkness.
Scuvry	Lack of Vitamin C	Bleeding gums
Anaemia	Lack of Iron	Weakness and tiredness
Goitre	Lack of Iodine	Swelling in neck

Long Answer Type Questions:

Q1. How can communicable diseases be prevented from spreading?

Ans. Communicable diseases can be prevented by following by the given measures:

1. Keep your house clean with disinfectants, allow cross ventilation.
2. Use mosquito nets and mosquito repellents to avoid bitten by mosquitoes.
3. Boil water or use water purifiers to kill gems in it.
4. Cover the food and water properly.
5. Always wash hands before eating something.
6. Take vaccination as available for many diseases, like chickenpox, typhoid, polio etc.
7. Maintain distance from infected person.

Q2. Give the differences between communicable and non-communicable diseases.

Ans.

COMMUNICABLE DISEASES	NON – COMMUNICABLE DISEASES
1. The diseases which spread from one person to another are called communicable diseases.	1. The diseases which do not spread from one person to another are called non – communicable diseases.
2. They spread through direct contact, air, contaminated food and water, animal bite and insects.	2. These are caused by either deficiency of a nutrient in the body or over nutrition.
3. e.g. cold, cough, malaria etc.	3. e.g. night blindness, scurvy, goitre etc.

Activity : Draw a pie chart to describe a balance diet.