

# CHAPTER-1

## FOOD: WHERE DOES IT COME FROM?

**Q.1 Do you find that all living beings need the same kind of food?**

**A.** No, all living beings do not need the same kind of food. Because different types of organisms such as herbivores, carnivores and omnivores eat different kinds of food as per their needs.

**Q.2 Name five plants and their parts that we eat.**

**A.** (a) Apple tree-Fruit  
(b) Wheat plant-Seed  
(c) Potato plant-Stem  
(d) Beetroot plant-Root  
(e) Spinach-Leaves

**Q.1 Extra Questions**

**Define:**

**a. Herbivores-** Animals which eat only plants and plant products are called herbivores. Eg: cow, goat.

**b. Carnivores-** Animals which eat other animals are called carnivores. Eg: tiger, lion.

**c. Omnivores-** .Animals which eat both plants as well as other animals are called omnivores. Eg: bear, crow

**d. Honey-** A sweet liquid substance prepared by honeybees from the nectar is called honey.

**Q.2 What is food?**

**Ans** Food is the edible substance, consumed by humans and other animals to absorb energy for various activities like physical movement, growth and development.

**Q.3 Illustrate the significance of food for living organisms.**

**Ans** The importance of food is:

(i) It provides energy to our body, which is required to do various activities.

(ii) It helps in growth of living organisms.

(iii) It helps in the process of repair and replacement of damaged parts of the body of living organisms.

(iv) It protects us from various diseases and infections.

**Q.4 Illustrate the different sources of food items and ingredients with the help of examples.**

**Ans** There are mainly two sources of food items and their ingredients :

(a) Plants: Plants provide us vegetables, pulses, fruits, cereals, grains etc.

(b) Animals: Animals provide us meat, eggs, and milk etc.

**Q.5 What are ingredients?**

**Ans** Materials that are used to prepare food items are called ingredients.

**Q.6 What is sprouting?**

**Ans** Sprouting is the natural germination process in which small white structures grow out of the seeds. Such seeds with white structures (root) are called sprouts.

## CHAPTER-2

### COMPONENTS OF FOOD

**Q.1, Q.2, Q 4 and Q5 to be solved in the text book.**

**Q.3**

**Name two foods each rich in:**

(a) Fats (b) Starch (c) Dietary fibre (d) Protein

**Ans**

(a) Butter, Groundnut.  
(b) Rice, Potato.  
(c) All grains, Fresh fruits.  
(d) Milk, Fish.

**Extra Questions**

**Q.1**

**Define:**

**a. Nutrients-**The components of food which are needed by our body for growth and development are called nutrients.

**b. Obesity-** When a person eats too much fat-containing foods, then the fat gets deposited in his/her body and he/she may end up suffering from a condition called obesity.

**c. Balanced diet-** A diet which provides the right proportion of all the nutrients that our body needs along with roughage and water is called balanced diet.

**d. Deficiency diseases-** Diseases that occur due to lack of carbohydrates, proteins, vitamins and minerals in the diet over a long period of time are called deficiency diseases.

**e. Roughage-** The fibrous substances in our food are called roughage.

**Q.2**

**List various types of nutrients and Write the functions of each.**

**Ans**

The various types of nutrients are:

**(1) Carbohydrates:**

- i. They are mainly energy providing nutrients.
- ii. There are mainly two types of carbohydrates are present in our food such as:
  - a. Starch- wheat , rice
  - b. Sugar- honey, table sugar

**(2) Fats:**

- i. They provide energy for the body.
- ii. They give much more energy than carbohydrates, if consumed in same amount.
- iii. Food rich in fats are oil, ghee, butter, dry fruits etc.

**(3) Proteins:**

- i. They are called body building foods.
- ii. They help in formation and repairing of body parts.
- iii. Skin, hair, muscles are made up of proteins.
- iv. They protect our body from infections.
- v. Food rich in proteins are pulses, egg, meat etc.

**(4) Minerals:**

- i. They are also called protective food.
- ii. They are important for body functioning and help us to keep healthy.
- iii. Minerals such as:  
Calcium and phosphorus are essential for formation of teeth and bones.  
Iodine is essential to control the growth of body.  
Iron is needed to make haemoglobin.

**(5) Vitamins:**

- i. They help our body to protect against diseases.
- ii. They keep our bones, teeth, gums and eyes healthy.
- iii. They are necessary for proper digestion and normal growth of the body.
- iv. Milk, carrot, eggs, fruits, green vegetables are rich in vitamins.

**Q.3 Write the functions of water in our body.**

- Ans**
- (i) Water helps our body to absorb nutrients from the food.
  - (ii) It also helps in removing the waste from the body in the form of urine and sweat.
  - (iii) It helps in maintaining the body temperature.

**Q.4 What is the main function of roughage? Name some food items which provide roughage**

**Ans** Roughage does not provide any nutrient to our body. The main function of roughage is to help our body to get rid of undigested food.

Whole grains, fresh fruits and vegetables are the main sources of roughage.

**Q.5 Why should we not eat only one type of food?**

- Ans**
1. A single type of food cannot provide all nutrients required by our body.
  2. Our diet must contain sufficient quantity of different components of food for proper growth and maintenance of the body.

**Q.6 Why a balanced diet is not same for everyone? Explain.**

**Ans** A balanced diet varies with age, gender, and type of work one does:

1. A young child needs to eat more of protein and carbohydrates for providing energy and growth.
2. A pregnant woman needs more protein for the baby growing inside her womb.
3. A labourer doing hard work needs more of carbohydrates and fats as he needs more energy.

**Q.7 Why should we eat cooked food?**

**Ans** We should eat cooked food because :

1. Cooking kills harmful germs present in food.
2. Cooked food can be easily digested and absorbed by our body.
3. Cooking also improves the taste of food.



## CHAPTER-3

### FIBRE TO FABRIC

#### Text Book Exercise:

**Q.4 From which parts of the plant cotton and jute are obtained?**

**Ans** Cotton–From the fruit of the cotton plant(cotton boll)  
Jute– From the stem of jute plant.

**Q.6 Explain the process of making yarn from fibre.**

The process of making yarn from fibres is called spinning. In this process fibres from a mass of cotton were drawn out and twisted .This brings the fibres together to form a yarn.

#### Extra Questions

**Q.1 Defines:**

- a. Fibres-** The thin strands of threads made up of still thinner strands are called fibres.
- b. Looms-** The machines used for weaving of fabric are called looms. They can be power operated or hand operated.
- c. Fabric-** The material made up of yarn is called fabric.
- d. Yarn-** Fibres are twisted together to make yarn.

**Q.2 State how jute is obtained from the jute plant:**

- Ans**
1. The jute plant harvesting is done at flowering stage.
  2. The stems of the harvested plants are bundled and kept in water for ten to fifteen days.
  3. The stems rot and fibres are separated by hand. This process is called retting.
  4. Then these fibres are converted into yarns that are used to make fabrics.

**Q.4 How are yarns made from the cotton boll?**

- Ans**
1. The fruits of cotton plant are called cotton bolls.
  2. After maturing, bolls open and seeds covered with cotton fibres can be seen.
  3. From these bolls, cotton is usually picked by hands.
  4. Fibres are then separated from the seeds by combing. This process is called ginning of cotton.
  5. After ginning fibres are sent for spinning to convert into yarn.

**Q.3 What is knitting and weaving?**

- Ans**
- Knitting and weaving are the methods used for making different kinds of fabrics.
- a. knitting- The process of using a single yarn to make a piece of fabric is called knitting.
  - b. Weaving – The process of arranging two sets of yarn together to make a fabric is called weaving.

**Q.4 Which devices are used for spinning?**

- Ans**
1. A simple device used for spinning is a hand spindle, also called **takli**.
  2. Another hand operated device used for spinning is **charkha**.
  3. Spinning of yarn on a large scale is done with the help of spinning machine.

**Q.5 What type of soil and climate are good for growing cotton?**

**Ans** Black soil and warm climate is good for growing cotton.

**Q.6 In which region was the cotton crop grown in India in early days?**

**Ans** The early Indians grew cotton crop in the regions near river Ganga.

**Q.7 Explain the various types of fibre.**

**Ans**

Mainly fibres are of two types:

1. Natural fibre- fibres obtained from natural sources such as plants and animals are called natural fibres. Natural fibres are of two types-

a. Plant fibres- Fibres obtained from plants are called plant fibres. Eg; cotton, jute

b. Animal fibres- Fibres obtained from animals are called animal fibres. Eg: wool, silk

2. Synthetic fibre- Fibre made in factories using chemicals are called synthetic or artificial fibres. Eg: Nylon, Polyester etc.

## CHAPTER-4

### SORTING MATERIAL INTO GROUPS

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#### Extra questions

#### Defines:

- a. Material-** The matter of which an object is made is called materials.
- b. Transparent materials** – Materials through which light passes completely are called transparent materials. Eg: clear glass, clean water, air etc.
- c. Translucent materials** – Materials which allow light to pass through them partially are called translucent materials. Eg: Frosted glass, Oiled paper etc.
- d. Opaque materials-** Materials which do not allow light to pass through them are called opaque materials. Eg: Wood, Metals, Book etc.
- e. Density-** density is defined as mass per unit volume.

$$\text{Density} = \text{Mass/Volume}$$

**Q.1**      **Grouping of objects helps the shopkeeper,” Describe the statement.**

**Ans**      shopkeeper feels easy by proper grouping of objects in following ways:

- (i) The object can be easily and quickly located.
- (ii) He will easily identify the goods that are going to be sold out and he can buy easily for his customers

**Q.2**      **What are soluble and insoluble materials?**

**Ans**      1. If a material dissolves completely in water, is said to be soluble materials. Eg: salt, sugar.  
2. If a material does not dissolve in water, is said to be insoluble. Eg: soil, chalk powder.

**Q.3**      **Why cups are not made of cloth?**

**Ans**      Generally, we use cups, which are made by glass, plastic and metal, which contain liquid. Cups, which are made by cloth, cannot hold a liquid due to the following reasons:

- (i) Cloth piece is very light to hold liquids
- (ii) Cloth piece contain micro pores through which the liquid comes out

**Q.4**      **Lustre (shine) is the property of metal. Certain metal articles become dull and lose their shine why? Give reason**

**Ans**      Metals react with moisture when exposed to air and gases present in it, hence forming a dull layer of other compounds on it.

**Q.5**      **How can you identify hard and soft materials based on their hardness? Explain with example.**

**Ans**      1. Materials which can be compressed easily are called soft materials. Eg. Cotton and sponge are soft materials.  
2. Materials which cannot be compressed are called hard materials. Eg: wood and metals are hard materials.

**Q.6**      **How will you decide whether a solid or liquid will sink or float in a liquid?**

**Ans**      We will decide whether a solid or liquid will sink or float in a liquid on the basis of its density.

- 1. If density of material is less than liquid, it floats.
- 2. If density of material is more than liquid, it sinks.

**Q.7**      **What happens when chalk powder and kerosene oil are added to water? Why?**

**Ans**      1. Chalk powder will sink and settle at the bottom of water because its density is more than water.

2. Kerosene oil will float at the surface of water because its density is less than water.

**Q.8** **How are oxygen and carbon dioxide gases dissolved in water helpful for aquatic life?**

**Ans**

1. The plants and animals which live in water use the oxygen dissolved in water for respiration.
2. The plants which live in water use the carbon dioxide dissolved in water for the process of photosynthesis.



## CHAPTER-5

### SEPARATION OF SUBSTANCES

**Q.1** Why do we need to separate different components of mixture? Give two examples.

**Ans** We need to separate different components of a mixture:

1. To separate harmful or non-useful substances that may be mixed with it.
2. To separate even useful components if we need to use them separately.

Two examples are:

- Milk or curd is churned to separate butter
- Grain is separated from stalks, while harvesting.

**Q.2** What is winnowing? Where is it used?

**Ans** Winnowing is the process of separating heavier and lighter components of mixture by wind or by blowing air. This method is commonly used by farmers to separate lighter husk particles from heavier seeds grain.

**Q.3** How will you separate husk or dirt particles from a given sample of pulses before cooking?

**Ans** Husk or dirt particles from pulses are separated either by winnowing and sieving or by washing the pulses.

**Q.4** What is sieving? Where is it used?

**Ans** Sieving is a method of separation which allows the fine particles to pass through the holes of the sieve while the bigger impurities remain on the sieve. It is used at construction sites to separate pebbles and stones from sand.

**Q.5** How will you separate sand and water from their mixture?

**Ans** 1. We can separate sand and water from their mixture by Sedimentation, decantation and filtration.

2. Sand is insoluble and heavier than water, it settles down at the bottom.

3. After that we can easily separate water from sand by decantation.

4. Now pour the decanted water into the filter paper fitted in a funnel.

5. We will observe that clear water is collected in beaker while the sand particles remain on filter paper.

**Q.6** Is it possible to separate sugar mixed with wheat flour? If yes, how will you do it?

**Ans** 1. Yes, it is possible to separate sugar mixed with wheat flour. This can be done through the process of sieving.

2. The mixture of sugar and wheat flour is allowed to pass through a sieve. 3. The fine wheat flour passes through the sieve while sugar remains on the sieve.

**Q.7** How would you obtain clear water from a sample of muddy water?

**Ans** Same answer as Q5

**Q.10** Lemonade is prepared by mixing lemon juice and sugar in water. You wish to add ice to cool it. Should you add ice to the lemonade before or after dissolving sugar? In which case would be possible to dissolve more sugar?

**Ans** We should add ice after dissolving sugar because the dissolving power of water decreases with decrease in temperature. So, if we add ice before dissolving sugar, less amount of sugar will get dissolved.

**Extra questions**

Define:

- a. Mixture- When two or more than two substances are mixed together and no chemical reaction takes place there. It is called a mixture.
- b. Handpicking- The process used to separate slightly larger particles from a mixture by hand is called handpicking.
- c. Sedimentation- The deposition of solid impurities at the bottom of a liquid is called sedimentation.
- d. Decantation- The pouring out of a liquid from a vessel without disturbing sediments is called decantation.

**Q.1 When is handpicking used?**

**Ans** the process of handpicking is used when,

- 1. The quantity of mixture is not too large.
- 2. The undesirable substance is of different shape, size and colour.
- 3. The undesirable substances are present in small quantity.

**Q.2 differentiate between-**

|            |    |  |   |
|------------|----|--|---|
| <b>Ans</b> | a. | <b>Evaporation</b><br>1. The process of converting liquid state into its vapour is called evaporation.<br>2. Heat is absorbed.   | <b>Condensation</b><br>1. The process of converting vapour state into its liquid state is called condensation.<br>2. Heat is released.                        |
|            | b. | <b>Threshing</b><br>1. The process of separating grains from stalk is called threshing.<br>2. It can be done manually by beating the stalks on a hard surface or by using machine called thresher. | <b>Winnowing</b><br>1. It is the process of separating husk from grains.<br>2. It can be done manually by blowing wind or by using a machine called winnower. |

**Q.3 How will you separate oil and water from their mixture?**

**Ans** Oil, being lighter than water, will float on it. Two distinct layers are formed and slowly oil is allowed to flow into another container and is separated from water. Separating funnel can also be used to separate the two.

## CHAPTER-6

### CHANGES AROUND US

**Q.1** To walk through a water logged area, you usually shorten the length of your dress by folding it. Can this change be reversed?

**Ans** Yes, this can be reversed by unfolding the folded clothes.

**Q.2** You accidentally dropped your favourite toy and broke it. This is a change you did not want. Can this change be reversed?

**Ans** No, this change cannot be reversed. Breaking a toy is an irreversible change.

**Q.3** To be discussed and solved in the text

**Q.4** A drawing sheet changes when you draw a picture on it. Can you reverse this change?

**Ans** We can reverse this change if the picture is drawn by pencil on drawing sheet. We can't reverse this change if the picture is made by pen, oil colours or sketch pen.

**Q.5** Give example to explain the difference between changes that can or cannot be reversed.

**Ans** (i) Paper can be folded to make different shapes. This is reversible change as shapes of paper can be unfolded back into paper sheet. But when paper is burnt and turned into ash, it can't be reversed.

(ii) If we fill balloon with air, the shape and size of the balloon changes. This change can be reversed but if balloon burst while inflating then this change can't be reversed.

**Q.6** A thick coating of paste of Plaster of Paris is applied over the bandage on a fractured bone. It becomes hard on drying to keep the fractured bone immobilized. Can the change in POP be reversed?

**Ans** No, the change in plaster of Paris cannot be reversed as it became hard on drying and new product is formed.

**Q.7** A bag of cement lying in the open gets wet due to rain during the night. The next day the sun shines brightly. Do you think the changes, which have occurred in the cement, could be reversed?

**Ans** No, because changes occur in cement, due to which it gradually sets in to a hard mass and this is an irreversible change.

#### **Extra Questions**

#### **Defines:**

**1. Reversible Change:** A change in which we get initial substance back by reversing the action is called reversible change. Eg., Inflating and deflating a balloon.

**2. Irreversible Change:** A change in which we cannot get back the initial substance by reversing the action. Eg., bursting a balloon.

**Q.1** Why does a blacksmith heat the metal rim to fix it on a cart wheel?

**Ans** A blacksmith heats the metal rim to fix it onto a cart wheel because

1. A metal rim is made slightly smaller. On heating, the rim expands and fits onto the wheel.

2. Then on cooling, the rim contracts and fits tightly onto the wheel.

**Q.2** What are slow and fast changes? Give examples.

**Ans** The changes which take place in a long period of time are called slow changes whereas that changes which take place in a short period of time are called fast changes.

**Examples:**

(a) Rusting of iron, ripening of fruits, growing of trees are slow changes.

(b) Burning of paper, stretching of rubber band, blowing of balloons, are fast changes.

**Q.3** What is a physical change? Explain with example.

**Ans** The change in which only physical properties of a substance are changed and no new substance is formed is called physical change. It is a reversible change. Example: Boiling and freezing of water.

**Q.4** What is a chemical change? Explain with example.

**Ans** The changes in which new substance with new chemical properties is formed, is called chemical change.

Example: By burning of paper a new substance ash is formed.

**Q.5** Why does a candle reduce in size on burning? What kind of change is it?

**Ans** The candle reduces in size on burning because-

1. The wax near the wick burns and changes into vapour and fumes.
2. It is an irreversible change as a new substance is formed that cannot be turned back into the candle again.

**CLASS- VI**

| <b>CH. No.:</b> | <b>CHAPTER NAME</b>            | <b>LINK FOR THE PRESENTATION</b>  |
|-----------------|--------------------------------|---|
| 1               | Food, where does it come from? | <a href="https://drive.google.com/file/d/13CNgDhFhRcd7M1wU9hr679wcApQ1avpV/view?usp=sharing">https://drive.google.com/file/d/13CNgDhFhRcd7M1wU9hr679wcApQ1avpV/view?usp=sharing</a> |
| 2               | Components of food             | <a href="https://drive.google.com/file/d/1-EF4faQc5rfnySwY7hB1qqTwXK-Jspjt/view?usp=sharing">https://drive.google.com/file/d/1-EF4faQc5rfnySwY7hB1qqTwXK-Jspjt/view?usp=sharing</a> |
| 3               | Fibre to fabric                | <a href="https://drive.google.com/file/d/1JLkx9Mp6D2U94Eqqgh1lj1MNXmt6lEzy/view?usp=sharing">https://drive.google.com/file/d/1JLkx9Mp6D2U94Eqqgh1lj1MNXmt6lEzy/view?usp=sharing</a> |
| 4               | Sorting materials into groups  | <a href="https://drive.google.com/file/d/11m1kOZWNdkCApQ-Nw4qtaRM_VhRx_qnG/view?usp=sharing">https://drive.google.com/file/d/11m1kOZWNdkCApQ-Nw4qtaRM_VhRx_qnG/view?usp=sharing</a> |
| 5               | Separation of substances       | <a href="https://drive.google.com/file/d/1MIWSdLQP_FvaUZdsMiF4gXiN5nz4qx4C/view?usp=sharing">https://drive.google.com/file/d/1MIWSdLQP_FvaUZdsMiF4gXiN5nz4qx4C/view?usp=sharing</a> |
| 6               | Changes around us              | <a href="https://drive.google.com/file/d/1umQPZK-8y1RKz8HfYe4Y0iyspeEK64PN/view?usp=sharing">https://drive.google.com/file/d/1umQPZK-8y1RKz8HfYe4Y0iyspeEK64PN/view?usp=sharing</a> |
| 7               | Getting to know plants         | <a href="https://drive.google.com/file/d/1IZ84kBykyWSC2tQcaOH2gG71FJTvLGLj/view?usp=sharing">https://drive.google.com/file/d/1IZ84kBykyWSC2tQcaOH2gG71FJTvLGLj/view?usp=sharing</a> |
| 8               | Body movements                 | <a href="https://drive.google.com/file/d/1PI9FND4T3JGid41mcTTU5aXUadj5CXkP/view?usp=sharing">https://drive.google.com/file/d/1PI9FND4T3JGid41mcTTU5aXUadj5CXkP/view?usp=sharing</a> |
|                 |                                |   |

# CHAPTER-7

## Getting to Know Plants

### Defines:

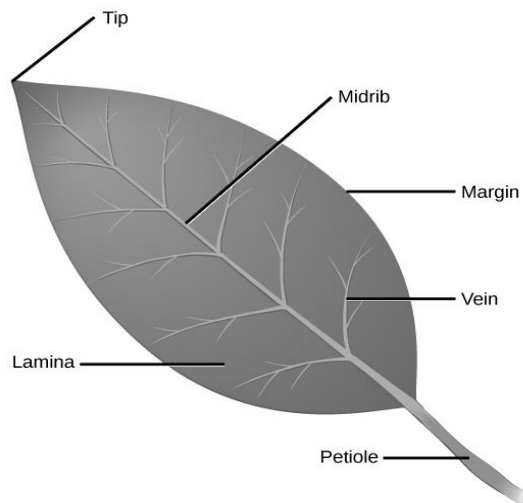
- a. **Transpiration-** The process by which plants release water in the form of water vapour through stomata is called transpiration.
- b. **Photosynthesis-**Plants prepare their food in the presence of sunlight and chlorophyll with water and carbon dioxide. This process is called photosynthesis.
- c. **Petiole-**The part of the leaf by which it is attached to the stem, is called petiole.
- d. **Lamina-** The broad green flat part of the leaf is called lamina.
- e. **Ovules-** Small bead like structures inside the ovary are called ovules.
- f. **Leaf venation:** The arrangement of veins in a leaf is called leaf venation.

### Text book Exercise:

Q1, Q3, Q5 and Q10 (Do in textbook)

Q.2

Draw a diagram of leaf.



Q.4

What is the function of a stem in a plant? (Answer is given in additional Q.1)

Q.6

If a plant has fibrous roots. What type of venation do its leaves likely to have?

Ans

Parallel venation

Q.7

If a plant has leaves with reticulate venation. What kind of roots will it have?

Ans

Tap root

Q.8

Is it possible for you to recognize the leaves without seeing them? How?

Ans

Yes, we can recognize the leaves of the plant by seeing the root of the plant.

1. If the plant has tap root, then its leaves have reticulate venation.

2.If the plant has fibrous root, then its leaves have parallel venation.

Q.9

Name the parts of flower. (Answer is given in additional Q.2)

Q.11

Name the part of the plant which produces its food. Name this process.

Ans

Leaves prepare the food of plant by the process of photosynthesis.

Q.12

In which part of flower, you likely to find the ovary?

**Ans** It is the lowermost and swollen part of the pistil.

**Q.13** **Name two flowers each with joined and separated petals.**

**Ans** Flower with joined sepals- Hibiscus, Periwinkle

Flower with separated sepals- Rose, Magnolia

**Additional questions**

**Q.1** **Write important functions of-**

**Ans** **A Leaf-**

1. Leaves prepare food for the plants by the process of photosynthesis.
2. Tiny pores stomata present on leaf's surface help in exchange of gases.
3. Leaves perform transpiration.
4. In some plants leaves store food and can be eaten. Eg: cabbage, spinach

**b Stem-**

1. Stem helps the plant to keep upright.
2. Stem carries water and minerals from the roots to the leaves and prepared food to various parts of the plants.
3. Some stems store food and can be eaten, such as- potato, onion etc.
4. In some plants stem is of green colour and perform photosynthesis. Eg: Cactus

**c. Roots-**

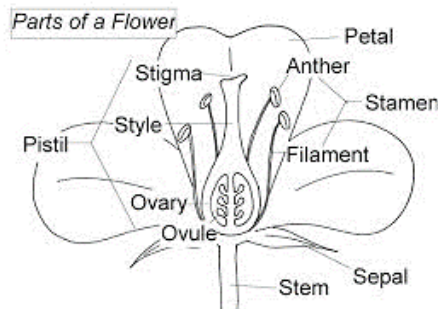
1. Roots anchor the plant to the soil.
2. Roots absorb water and minerals from the soil.
3. In some plants food is stored in roots and they can be eaten. Eg. Carrot, turnip etc

**d. Flowers-**

1. Flower is main reproductive organ in plants and leads to the formation of fruits and seeds.
2. Flowers also can be eaten such as- cauliflower, banana, pumpkin etc
3. Flowers are also used for decoration.

**Q.2** **Draw a well labelled diagram of a complete flower and write the functions of its various parts.**

**Ans**



A flower consists of various parts-

1. **Sepals-** It is the outer most green colour leaf like structure of the flower. It protects the flower in bud stage.
2. **Petals-** It is the most prominent part of the flower. Petals are usually bright coloured. This helps to attract insects for pollination.
3. **Stamen-** It is the male reproductive part of the flower. It consists of filament and anther. Anther produces the male gametes.
4. **Pistil/ Carpel-** It is innermost and female reproductive part of the flower. It consists of stigma, style and ovary. Ovary contains ovules and female gamete is present inside the ovule.

**Q.3** **Give the differences between-**

(a)

**Root**

1. Root is underground non green part of the plant's body.
2. Its main function is absorption of water and minerals from the soil.

(b)

**Nodes**

The place from where branches and leaves arise on the stem is called node.

(c)

**Herbs**

1. Small plants with tender and green stem are called herbs.
2. Branches are present but not too many.

(d)

**Creepers**

Plants that cannot stand upright and spread on the ground are called creepers.  
Eg: watermelon, pumpkin

(e)

**Parallel venation**

1. Veins run parallel to one another.
2. Plants having leaves with parallel venation will have fibrous root system.  
Eg. Banana



**Stem**

1. Stem is above the ground part of the plant's body.
2. Its main function is transportation of substances.

**Internodes**

The gap between two nodes on the stem is called inter node.

**Shrubs**

1. Medium sized plants with hard woody stems are called shrubs.
2. Branches are present and they arise near the ground level.

**Climbers**

Plants which climb up with the support of neighbouring structure are called climbers.  
Eg: money plant, grapevine

**Reticulate venation**

1. Veins are arranged in a net like pattern on both sides of midrib.
2. Plants having leaves with reticulate venation will have tap root.  
Eg. Pea, Peepal



(f)

**Tap root**

There is a main root, from which a number of lateral roots arise.



Eg: Neem

**Fibrous root**

There is no main root, a number of similar sized roots arise in a cluster and spread.



Eg. Grass



## **CHAPTER-8**

### **BODY MOVEMENTS**

**Q.1. Q.2.Q.3 to be discussed and solved in the class**

- Q.4** (a) **Which of the skull bones are movable?**  
(b) **Why can our elbow not move backwards?**

- Ans** (a) In skull, only lower jaw is movable.  
(b) Our elbow cannot move backwards because the elbow has a hinge joint that allows only back and forth movement.

#### **Extra Questions**

##### **Define:**

- a. Joints-** The place where two bones of our body are joined together is called joint.  
**b. Skeleton-** all bones of our body form a framework to give shape to our body. This framework is called skeleton.  
**c. Rib cage-** Ribs bend and they join the chest bone and backbone together to form a box. This is called rib cage.  
**d. Cartilage-** Additional parts of the skeleton that are not hard as bones and can be bend are called cartilage.

- Q.1** **How is a bird's body adapted for flying?**

**Ans** The following adaptations are seen in the body of birds.

- (i) Bones are hollow and light.
- (ii) Forelimbs are modified into wings.
- (iii) Body is streamlined
- (iv) Shoulder bones are strong.

- Q.2** **Why do we need two muscles together to move a bone?**

- Ans**
1. A muscle can only pull, it cannot push.
  2. Thus, two muscles are required to work together to move a bone.
  3. When one muscle contracts, the bone is pulled in that direction. Other muscle of the pair relaxes.
  4. When another muscle of the pair contracts, it pulls the bone and brings the bone in its original position. First muscle of the pair relaxes.
- Hence two muscles have to work together to move a bone.

- Q.3** **How does the snake move?**

- Ans**
1. Snakes have a long backbone and many thin muscles which help in the movement.
  2. The snake's body curves into many loops. Each loop of the snake gives it a forward push by pressing against the ground.

**Q.4 How does the earthworm move?**

- Ans**
1. Earthworm does not have bones. It has muscles.
  2. During the movement, earthworm first extends front part of the body keeping the rear portion fixed to the ground.
  3. Then it fixes the front and releases the rear end. It then shortens the body and pulls the rear end forward.
  4. In this way by repeating such muscular expansions and contractions earthworm moves.

**Q.5 How does the snail move?**

- Ans**
1. The rounded structure on the back of the snail is called shell. It is the outer skeleton (exoskeleton) of snail.
  2. When it starts moving a thick structure and the head of the snail may come out of an opening in the shell.
  3. The thick structure is called foot, which is made up of strong muscles. It helps snail in moving.

**Q.6 Explain various kinds of joints found in our body and give example of each.**

**Ans** There are three types of joints in our body:

**(i)Freely movable joints:** Those joints which allow free movement are called freely movable joints. Types of freely movable joints-

(a) Ball and socket joint: This joint allows movement in all directions. The rounded end of one bone fits into the hollow space of other bone. Eg: shoulder joint, hip joint.

(b) Pivotal joint: This joint allows movement of our head forward, backward and left or right. Eg; Joint between neck and head.

(c) Hinge joint: The joint which allows movement only in one plane is called hinge joint. For example, fingers, knees, elbow.

(d) Gliding joint: These joints allow only a limited amount of movement of sliding nature of cartilage. Eg: wrist, ankle.

**(ii)Fixed/Immovable joint-** The joint which does not allow movement is called fixed joint. Eg., joint in the skull.

**(iii)Slightly Movable joint-**The joint which can move slightly is called slightly movable joint. Eg., ribcage, backbone

**Q.7**      **What are the main functions of skeletal system?**

- Ans**    1
1. It gives shape to the body.
  2. It forms a framework and provides support to the body.
  3. It protects soft internal organs like heart, lungs, etc
  4. It facilitates movement.
  5. It produces blood cells.