❖NCERT Textbook Question Solutions (Page 31-33)

1. Here are two types of seeds. What differences do you find among the roots and leaf venation of their plants?

(a) Wheat

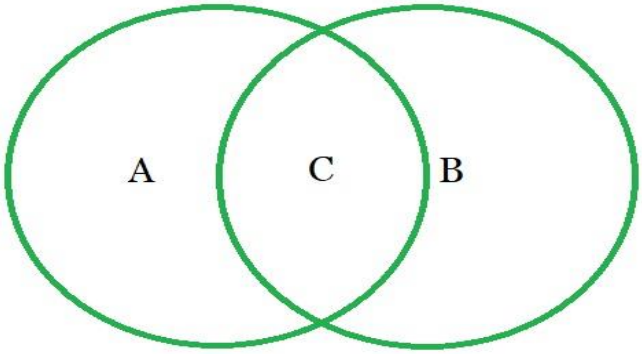
(b) Kidney beans

Answer: (a) Wheat is a monocot seed. It has fibrous roots with parallel venation in its leaves.

(b) Kidney beans (Rajma) are dicot Seeds. They have taproots with reticulate venations in their leaves.

2. Names of some animals are given below. Group them based on their habitats. Write the names of aquatic animals in the area marked 'A' and terrestrial animals in the area marked 'B'. Enter the names of animals living in both habitats in part 'C'.

Horse, Dolphin, Frog, Sheep, Crocodile, Squirrel, Whale, Earthworm, Pigeon, Tortoise

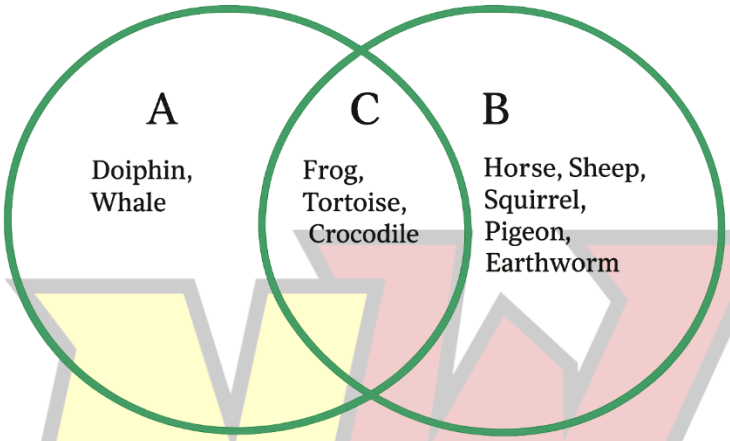


Answer: Grouping animals based on their habitats is as follows:

Aquatic animals (Area A) = Dolphin and Whale

Terrestrial animals (Area B) = Horse, Sheep, Squirrel, Pigeon and Earthworm.

Animals living on land and sea both (Area C) = Frog, Tortoise and Crocodile.



3. Manu's mother maintains a kitchen garden. One day, she was digging out radish from the soil. She told Manu that radish is a kind of root. Examine a radish and write what type of root it is. What type of venation would you observe in the leaves of radish plant?

Answer: Radish is a taproot. The leaves of the radish plant have reticulate venation.

4. Look at the image of a mountain goat and a goat found in the plains. Point out the similarities and differences between them. What are the reasons for these differences?

(a) Mountain Goat

(b) Goat found in the plains

Answer: Similarities

i. Both type of goats are herbivores and eat plants.
ii. Both have hooves and horns.

Differences

	Mountain Goat	**Plains Goat**
1	It has long and thick fur to protect against cold climate.	It has shorter fur suited for warmer climate of plains.
2	It has specialized hooves with rough texture for better grip on mountain surfaces.	It has smoother hooves to help them walk on plains.
3	It has curved, sharp horns for defence.	Horns of plains goat are usually pronounced than those of mountain goat.

Reason for differences between mountain and plains goat: The differences in their features arise due to difference in the climatic conditions of the habitats. The mountain goats live in cold climatic conditions of mountains while plain goats live in the comparatively very less cold climatic conditions of plains.

5. Group the following animals into two groups based on any feature other than those discussed in the chapter- cow, cockroach, pigeon, bat, tortoise, whale, fish, grasshopper, lizard.

Answer: These animals can be grouped as follows:

a) Based on whether they have backbone or not.
Animals which have backbone: Cow, pigeon, bat, tortoise, whale, fish, lizard
Animals which do not have backbone: Cockroach, grasshopper
b) Based on the ability to fly

Animals that can fly – Pigeon, Bat, **Cockroach, grasshopper** (short distances only)

Animals that cannot fly – Cow, tortoise, whale, fish, lizard

6. As the population grows and people want more comfortable lives, forests are being cut down to meet various needs. How can this affect our surroundings? How do you think we can address this challenge?

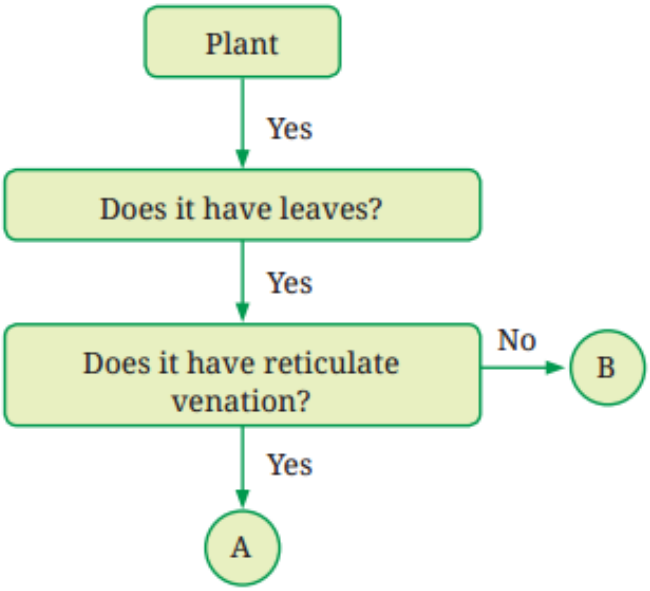
Answer: Affect of cutting down of trees:

- Loss of biodiversity
- Global warming
- climate change
- soil erosion
- Flooding
- Ecological imbalance due to loss of habitat of wild animals
- Lowering of water table.

Addressing the challenge:

- Planting new trees
- Establishing more national parks and wildlife sanctuaries to protect existing forests
- Engaging local communities in forest conservation efforts
- Implementing regulation and laws that prevent deforestation
- Avoiding wastage of paper
- Avoiding use of firewood
- Population control
- Educating people about the importance of forests.

7. Analyse the flow chart. What can be examples of 'A' and 'B?



Answer:

A. **Plants with reticulate venation**: Examples include mango, rose, or any other dicot plant
B. **Plants with parallel venation:** Examples include grass, wheat, or any other monocot plant

8. Raj argues with his friend Sanjay that "Gudhal (hibiscus) plant is a shrub." What questions can Sanjay ask for clarification?

Ans. Sanjay could ask:
i. How tall is the Gudhal (hibiscus) plant?
ii. Does it have a single main stem or multiple stems?
iii. Are the stems woody or soft?
iv. Do the branches start near the ground or higher up?

9. Based on the information in the table, find out examples of these plants for each group.

Group	Type of seed	Type of root	Examples
A	**Dicot**	**Taproot**	
B	**Monocot**	**Fibrous roots**	

(a) What other similarities do plants of group A have?

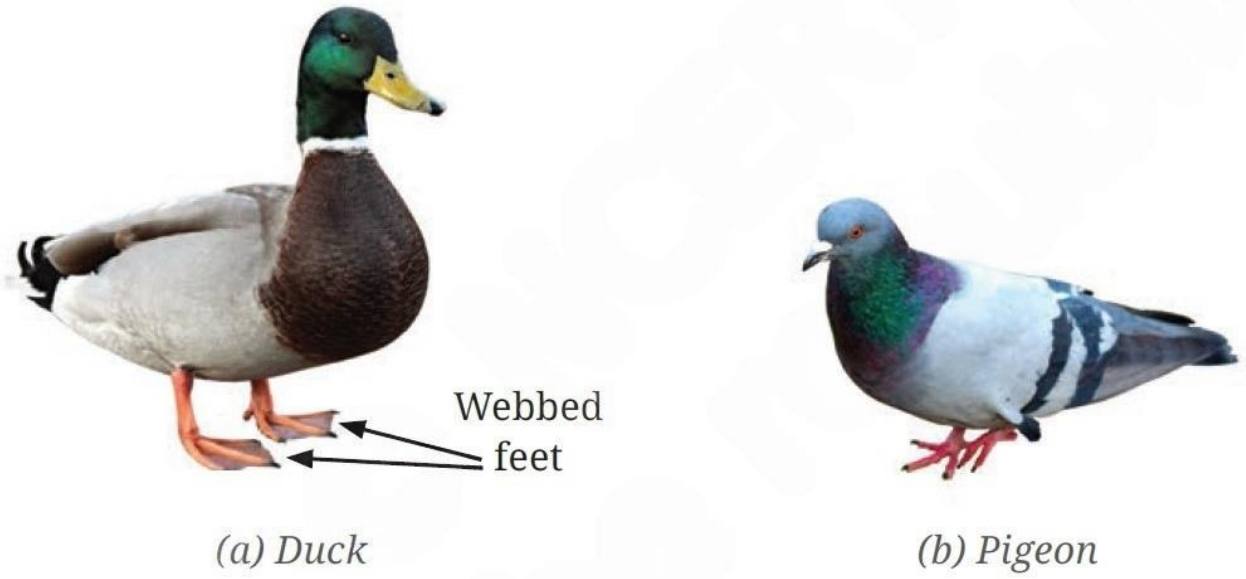
(b) What other similarities do plants of group B have?

Answer:

Group	Type of seed	Type of root	Examples
A	Dicot	Taproot	Mango, Hibiscus, Rose, carrot, etc.
B	Monocot	Fibrous roots	Wheat, Rice, Grass, onion, garlic etc

(a) Plants in group A have reticulate venation in their leaves.
(b) Plants in group B have parallel venation in their leaves.

10. Observe the labelled part of a duck in the picture given below. What differences do you observe in the feet of the duck compared to the other birds? Which activity would the duck be able to perform using this part?



(a) Duck *(b) Pigeon*

Answer:

Ducks have webbed feet, which are different from the feet of the other birds like pigeon.

activities the duck can perform with webbed feet

i. Swimming in water
ii. Walking on muddy and wet surfaces as webbed feet provide stability and prevent the duck from sinking.