



ST. XAVIER'S HIGH SCHOOL

Chapter 2 Diversity in the living world

Buzz words

1. Adaptation
2. Biodiversity
3. Flora
4. Fauna
5. Herbs
6. Shrubs
7. Trees
8. Creepers
9. Climbers
10. Tap root
11. Fibrous root
12. Midrib
13. Venation
14. Reticulate
15. Parallel
16. Veins
17. Cotyledon
18. Dicot
19. Monocot
20. Habitat
21. Terrestrial
22. Aquatic
23. Transpiration
24. Gills
25. Blowholes
26. Lungs
27. Amphibians
28. Camouflage

Definitions

1. Diversity- refers to the differences in the living organisms (plants, animals and microorganisms) found in nature.
2. Habitat: The natural environment (land or water) where an organism lives, providing food, water, and shelter.
3. Adaptation: special features that enable an organism to survive in the harsh environmental conditions.
4. Herbs: Small plants with soft, green, and tender stems (e.g., coriander, mint).
5. Shrubs: Medium-heighted plants with hard, woody stems that branch near the base/ground
6. Trees: Tall plants with thick, hard brown stems (trunk) and branches high above the ground

7. Venation: The pattern of veins on a leaf blade
8. Taproot: A thick main root growing deep into the soil with smaller, thin lateral roots (commonly found in dicot plants).
9. Fibrous Roots: A cluster of thin, bushy roots arising from the base of the stem (commonly found in monocot plants).
10. Monocots: Plants whose seeds have one cotyledon (part), usually showing parallel venation and fibrous roots.
11. Dicots: Plants whose seeds have two cotyledons (parts), typically having reticulate venation and taproots.
12. Aquatic Habitat: Places where plants and animals live in water (e.g., oceans, ponds).
13. Terrestrial Habitat: Land-based environments where organisms live (e.g., forests, deserts, mountains).
14. Transpiration- loss of water from the leaves of the plant.
15. Camouflage- the ability that enables an organism to protect itself from its predators.

Short answer type questions

1. Differentiate between taproot and fibrous root

Taproot	Fibrous root
Has one main root with smaller branches	No main root; many roots arise from base
Grows deep into the soil	Spreads near the surface

Found in dicots (e.g., mustard)

Found in monocots (e.g., wheat)

2. Give reasons:

(a) Most desert plants are succulent.

Desert plants are succulent because they store water in their thick stems or leaves to survive long periods without rainfall.

(b) Ducks have hollow bones.

Hollow bones make ducks lighter, helping them float easily in water and also aiding in flight.

(c) Aquatic plants have small roots.

Aquatic plants do not need large roots because water and nutrients are easily available; roots mainly help in anchorage.

(d) The eyes of deer are located on the side of the head.

This gives deer a wide field of vision, helping them detect predators quickly.

3. Lion is a good predator. Elaborate.

A lion is a good predator because it has:

- Sharp claws and strong teeth for catching and tearing prey
- Powerful legs for running fast
- Forward-facing eyes for accurate focus
- Strong sense of smell and hearing

4. What do you understand by adaptation? Discuss with an example.

Adaptation refers to special features or habits that help an organism survive in its environment.

Example: Camel has wide and padded feet and a hump to survive in deserts.

5. Is the reduced feeling of cold adaptation? Why/Why not?

No, it is not an adaptation. It is **acclimatization**, which is a temporary adjustment to environmental changes, not a permanent inherited feature.

Q.7 LONG ANSWER QUESTIONS

1. Features of camel for desert survival

- Hump stores fat (used for energy)
 - Long legs keep body away from hot sand
 - Broad feet prevent sinking in sand
 - Long eyelashes protect from sand
 - Can survive without water for many days
 - Thick lips allow eating thorny plants
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2. What is leaf venation? Types of venation

Leaf venation is the arrangement of veins in a leaf.

Types:

1. **Reticulate venation** – veins form a network (e.g., mango)
 2. **Parallel venation** – veins run parallel (e.g., grass)
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