Cards and clues

Guess the modification

Clues

1. The root is modified.
2. Such plants grow in saline/ mangrove habitat.
3. The roots are negatively geotropic.
4. The soil is muddy and hence generally lack air.
5. Such modifications are found in species like Avicennia, Rhizophora etc.

Answer- Respiratory roots/ Pneumatophores

Name the modification

Clues

1. It is a kind of tap root modification.
2. The root is modified into a spindle shaped structure that is narrow and tapering at either ends and broader in the middle.
3. The darker scar above the root can be used as a seeding material for vegetative propagation.
4. It functions in food storage.
5. Radish is a classic example of such roots.

Answer- Fusiform roots

Guess the tree species

Clues

1. It is a large tree with massive trunk and heavy branches.
2. The root is produced from aerial branches.
3. They grow vertically downwards and penetrate the soil.
4. Such roots are called prop roots and offers immense mechanical support to the heavy branches.
5. The tree is also of huge cultural and religious significance.

Answer- Banyan tree.

Guess the function

Clues

1. It is a type of root modification.
2. It is found in monocots especially grass varieties like maize, sugarcane.
3. These roots arise from a few lower nodes of the stem.
4. It grows towards the soil and penetrate the ground.
5. Such roots are called stilt roots.

Answer - Stilt root reinforces anchorage as fibrous roots are superficial and weak. It also helps in absorption.

Name the modification

Clues

1. It is a kind of tap root modifications.
2. It functions in food storage.
3. The root is broader above and narrow tapering towards the tip like a cone.
4. The darker scar above the root can be used as a seeding material for vegetative propagation.
5. Carrot is a classic example of such roots.

Answer- Conical roots

Guess the purpose of modification

Clues

1. These are modified stems called runners
2. These special stems are narrow, green, horizontally running branches.
3. Such branches are borne from the base of erect aerial stem.
4. The spread in multiple directions and has scaly leaves and axillary buds.
5. They are found in grass species.

Answer- They are responsible for the vegetative propagation of plants. The axillary buds produce adventitious roots and erect aerial stem which later becomes an independent plant.

Guess the purpose of modification

Clues

1. These are modified adventitious roots.
2. The lateral roots are swollen without definite shape
3. These roots arise from the stem and enter into the soil.
4. The examples are Manihot, sweet potato etc.

Answer- The roots are swollen for the purpose of storage.

Guess the habitat of the plant

Clues

1. The aerial stems are modified into flat leaf like structure.
2. They are also thick, fleshy and succulent.
3. The leaves are often reduced to spines and thorns to reduce the area of transpiration and for defence.
4. The stem stores water storage to survive dry conditions.
5. E.g. Cactus

Answer- These adaptations enable the plant to survive at xeric conditions (less water).

Guess the purpose of modification.

Clues

1. The tendrils are an example of leaf modification.
2. Commonly seen in weak stemmed plants.
3. The terminal leaflets become elongate, cylindrical, thin, wiry and sensitive.
4. It is often green and common among cucurbits.
5. It is also seen among peas, beans etc.

Answer- Tendrils helps the plants to twine around and climb up on the support.

Guess the plant.

Clues

1. An important leaf modification is seen.
2. The leaf is slippery with an extension of midrib.
3. The midrib extension protrudes from the tip of the leaf and modifies, along with the leaf blade, as a flask with a lid called pitcher
4. The pitcher is born as a bud and gradually develop to become cup or flask shaped structure.
5. They grow in soil which is poor in minerals and nitrogen.
6. The pitcher attracts insects, trap them inside and digest.

Answer- *Nepenthes sp*. or Pitcher plant.

Guess the part modified.

Clues

1. It is an underground modification.
2. The modified part is swollen and is called rhizome.
3. The chief function of it is to store food.
4. It has distinct nodes and internodes and bears adventitious buds at nodal regions.
5. Common examples are ginger, turmeric etc.

Answer- Underground stem modification.

Guess the modification.

Clues

1. This modification is found in plants like *Cuscuta*.
2. The stem is weak and yellow or pale.
3. They bear no leaves.
4. The plant climb on other plants and absorb nutrients from the living plants.
5. They are called parasites of plant kingdom and bear flowers at maturity.

Answer- The haustoria penetrate the host cells to absorb nutrients. These are called sucking roots .

Name the modification

Clues

1. It is a kind of tap root modifications.
2. The modified structure is short with a broad upper section, broader mid portion and tapering end.
3. The darker scar above the root can be used as a seeding material for vegetative propagation.
4. It functions in food storage.
5. Beet root, Knol kol is a classic example of such roots.

Answer- Napiform roots