

7th Science Lesson 5 Questions in English**5] Reproduction and Modification in Plants**

1. Which among the following is not the reproductive organ in plant?

- a) Root
- b) Flower
- c) Fruit
- d) Seed

Explanation

The flowering plants have root, stem and leaves. They are called vegetative organs. Flowers, fruits and seeds in a plant are called reproductive organs.

2. The process by which plants and animals produce young ones and increase their number is known as_____

- a) Fusion
- b) **Reproduction**
- c) Fission
- d) Combustion

Explanation

The process by which plants and animals produce young ones and increase their number is known as 'reproduction'.

3. Seed is produced from what by the process of pollination and fertilization?

- a) Leaf
- b) **Flower**
- c) Root
- d) Stem

Explanation

Seed is produced from a flower by the process of pollination and fertilization. This is known as sexual reproduction.

4. Drumstick can be grown by which reproductive process?

- a) Sexual reproduction
- b) Asexual reproduction
- c) **Both Sexual and Asexual**
- d) None of the above

Explanation

Drumstick tree can be grown from both seeds and stem cuttings. When plants reproduced from seeds, we call that process as sexual reproduction. All other ways of reproduction without seed are called as asexual reproduction.

5. Which among the following is not the part of flower?

- a) **Node**
- b) Sepal
- c) Petal
- d) None of the above

Explanation

Node is the part of stem.

6. In a bud, we can see a green colour, leaf like structure which cover the whole bud or flower is called _____

- a) Petal
- b) **Sepal**
- c) Stamen
- d) Pistil

Explanation

In a bud, we can see a green colour, leaf like structure which cover the whole bud or flower, each of these green like structure present as an outermost layer is called as sepal.

7. The outermost ring of sepals is called _____

- a) Petals
- b) **Calyx**
- c) Corolla
- d) Pistil

Explanation

The outer most ring of sepals is known as calyx.

8. Which are the largest part of flowers often attractive, brightly coloured, sometimes sweet scented and attract the insects?

- a) Petals
- b) Stigma
- c) Ovule

d) Corolla**Explanation**

Petals are the largest part of flowers. They are often attractive, brightly coloured, sometimes sweet scented and attract the insects.

9. The ring of petals together is called _____

- a) Stigma
- b) Gynoecium
- c) **Corolla**
- d) Androecium

Explanation

The ring of petals together is called corolla.

10. Which are arranged on a long tube-like structure inner to the corolla in Hibiscus?

- a) **Stamen**
- b) Ovule
- c) Pistil
- d) Gynoecium

Explanation

Inner to this corolla, in Hibiscus, we can observe a long tube on which many stamens are arranged.

11. Like stamen in hibiscus, in Datura, we can see only five stalked structures, stamens. This ring or whorl of a flower is called _____

- a) Ovule
- b) Gynoecium
- c) Ovary
- d) **Androecium**

Explanation

Inner to this corolla, in Hibiscus, we can observe a long tube on which many stamens are arranged. But in Datura, we can see only five stalked structures, stamens. This ring or whorl of a flower is called androecium.

12. Which among the following is not the part of stamens?

- a) Filament
- b) **Style**

- c) Anther
- d) None of the above

Explanation

Each stamen consists of two parts – a stalk called filament and a lobe called anther. If you touch these lobes in a mature flower, we can get a powdery substance called pollen grains, male reproductive part.

13. The female reproductive part of flower is called?

- a) Stigma
- b) **Gynoecium**
- c) Corolla
- d) Androecium

Explanation

Inner to this androecium whorl, we can find a female reproductive part of the flower, called Gynoecium.

14. In which part of flower seeds are produced?

- a) **Ovary**
- b) Style
- c) Stigma
- d) Anther

Explanation

In Gynoecium you will find this part with a swollen bottom part. This is the ovary. Seeds are produced in this part.

15. On top of the ovary there is a slender tube-like structure called _____

- a) **Style**
- b) Stigma
- c) Ovule
- d) Corolla

Explanation

On top of the ovary there is a slender tube-like structure called style.

16. The top most sticky tip of the style which receive pollen grain is _____

- a) Ovule

- b) Datura
- c) **Stigma**
- d) Stamen

Explanation

The top most sticky tip of the style is stigma. Pollen grains are received by the stigma. This is the fourth whorl of a flower.

17. A group of flowers arranged together is called _____

- a) Spore
- b) Fragmentation
- c) **Inflorescence**
- d) Solanaceae

Explanation

A group of flowers arranged together is called inflorescence. *Tridax procumbens*, looks like a single flower, but is an inflorescence. Leaf juice of this plant is used to cure wounds and cuts.

18. Which is not a single flower but group of flowers clustered together?

- a) Hibiscus
- b) Datura
- c) **Sunflower**
- d) Lily

Explanation

The sunflower is not a single flower. It is a group of flowers clustered together. A group of flowers arranged together is called inflorescence.

19. Which among the following statement is correct

- 1) If all the three whorls- calyx, corolla and stamens are present, then it is called as complete flower. Complete flowers are bisexual flowers. If any of these three whorls is missing, then it is called as an incomplete flower.
- 2) Incomplete flowers are unisexual flowers. There are two types of unisexual flowers, male flower and female flower. The one with androecium and without gynoecium is called as male flowers and the one with gynoecium and without androecium is known as female flowers.
 - a) Only 1
 - b) **Only 2**
 - c) Both 1 and 2
 - d) None

Explanation

If all the four whorls- calyx, corolla, stamens and pistil are present, then it is called as complete flower. Complete flowers are bisexual flowers. If any of these four whorls is missing, then it is called as an incomplete flower.

20. The process by which pollen grains reach stigma is called as _____

- a) Contamination
- b) Conjunction
- c) Fermentation
- d) **Pollination**

Explanation

The process by which pollen grains reach stigma is called as pollination. The flower that receives pollen grains is called pollinated flower while the one that did not receive pollen grains is called as unpollinated flower.

21. Which among the following statement is correct

- 1) To understand how a flower develops into fruit, let us perform an experiment on pumpkin plant. We know that flowers of pumpkin are unisexual that is some of the flowers are male while many are female flowers. We can easily identify the male and female flower buds of pumpkin, even before they bloom.
- 2) Once flower buds appear, immediately identify ten female flower buds. Tie a plastic bag around each bud so that no outside material can enter. Ensure to make small holes with a pin to allow air flow. Wait for two to three days to bloom. Choose three to four male flowers. Pluck the stamens of these flowers and dust the pollen grains in a sheet of paper and collect it.
- 3) Open five out of ten bags containing female flowers. Brush the collected pollen grains on the stigma with a soft paint brush. Take care not to damage the stigma. After few days we can see that flower in all bags that were not opened at all would wilt without forming a fruit, while most of the flowers to which pollens have been applied for fruits.
 - a) Both 1 and 2
 - b) Both 1 and 3
 - c) Both 2 and 3
 - d) **All 1, 2 and 3**

22. Agents like Bees, butterflies and others help to carry pollen from one flower to another. Pollen grains stick to their legs, wings or abdomen when they move from one flower to another. This is called as _____

- a) Self-pollination
- b) **Cross-pollination**

- c) Point pollination
- d) Mixer pollination

Explanation

In some plants like grasses, pollen grains are light. Stamens shed pollen grains, and are carried by wind to another flower. Insects, birds are also other agents of pollination. Bees, butterflies and variety of bird's hover around flowers. They help to carry pollen from one flower to another. Pollen grains stick to their legs, wings or abdomen when they move from one flower to another. This is called as Cross pollination.

23. Which among the following is not self-pollinate?

- a) Beans
- b) Tomatoes
- c) Paddy
- d) **None of the above**

Explanation

Beans (Fabaceae), tomatoes (Solanaceae) are commonly self-pollinated. Even though, for example tomato, self-pollinate, they need the help of the insects to create vibrations within the flowers that will effectively loosen the pollen. Paddy is mostly self-pollinating using just gentle wind as the pollinating agent.

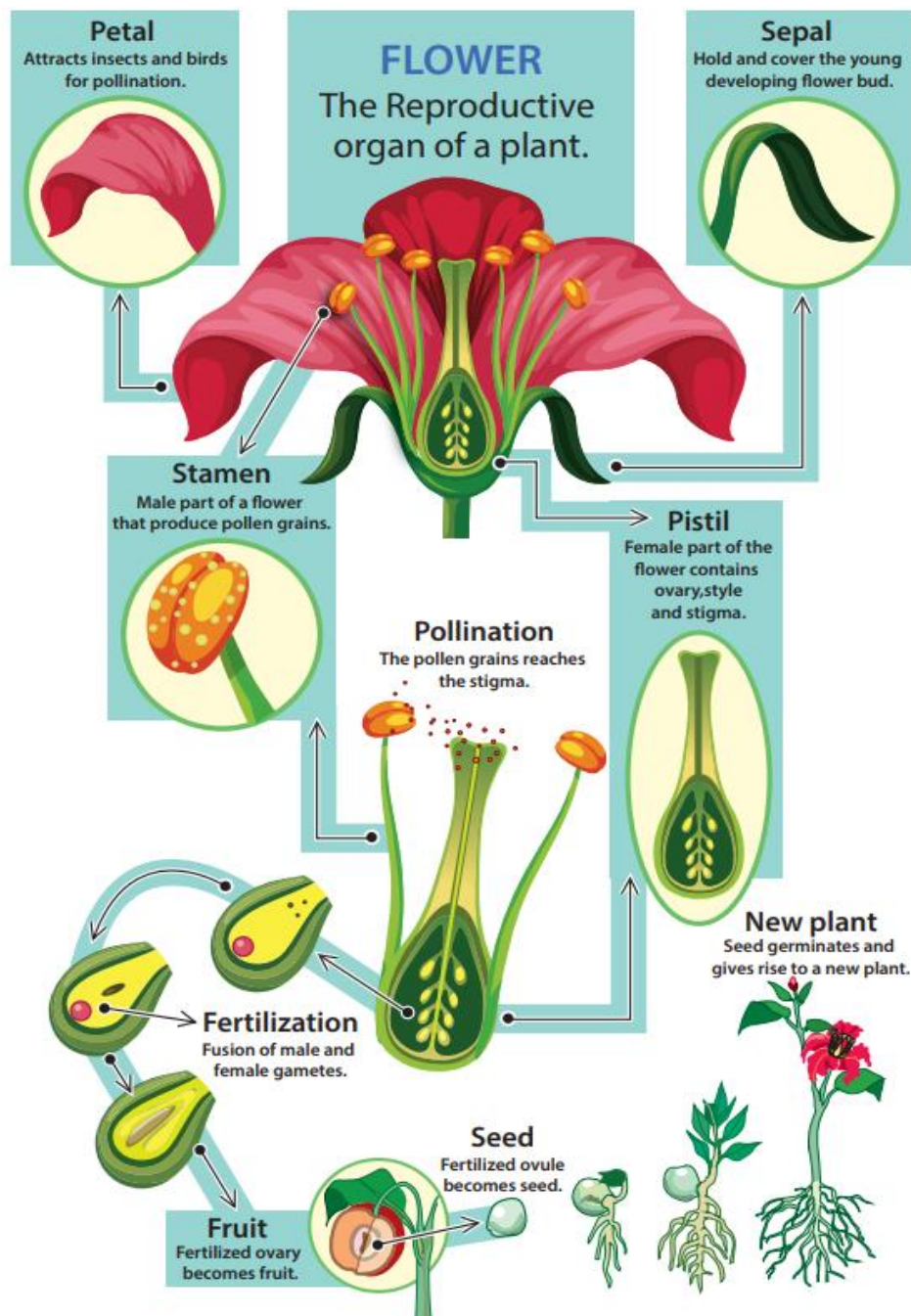
24. The agents that are helping in pollination are called _____

- a) Transmitter
- b) Carrier
- c) **Pollinator**
- d) Contaminator

Explanation

The agents that are helping in pollination are called pollinators.

Sexual Reproduction in Plants



25. Which among the following statement is correct

- 1) The process by which human transfer the pollen grains from male flower to the female flower artificially is called artificial pollination. However, in nature there are many ways in which pollen grains reach the stigma of the flower and is called as natural pollination.
- 2) When you shake stamens, pollen grains fallout. Thus, when a wind shakes the flower or when a butterfly agitates the flower, pollen grains could fall onto the stigma of same flower.

Some plants that have both the male and female parts within a single flower (unisexual) pollinate by this means. This is called as Point-pollination.

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) None

Explanation

When you shake stamens, pollen grains fallout. Thus, when a wind shakes the flower or when a butterfly agitates the flower, pollen grains could fall onto the stigma of same flower. Some plants that have both the male and female parts within a single flower (bisexual) pollinate by this means. This is called as Self-pollination.

26. In flower after pollination, male gamete fuses with the female gamete to form zygote. This process is known as _____

- a) Construction
- b) Sterilization
- c) **Fertilization**
- d) Stimulation

Explanation

During the germination a tube develops from the pollen grain that carries male gametes that ultimately reaches female gamete inside the ovary through the style. Male gamete fuses with the female gamete to form zygote. This process is known as fertilization.

27. What is the small rounded structure present inside the ovary is called _____

- a) Stamen
- b) Pollen
- c) **Ovule**
- d) Pedicel

Explanation

Inside the ovary, small rounded structures, ovules are present. In these ovules, female gamete is present.

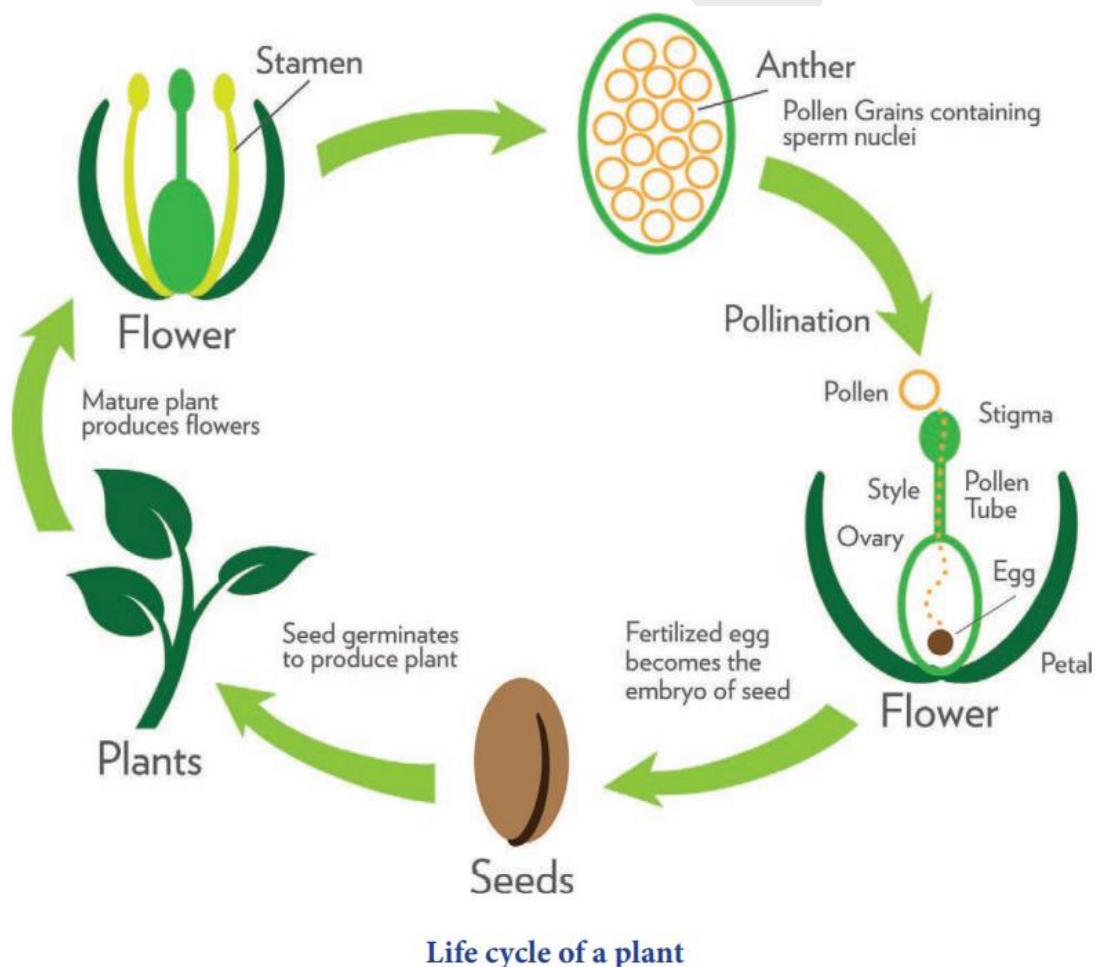
28. Which among the following statement about the fruits is incorrect

- 1) A green part above fruits of brinjal and lady's finger are petals of a flower. In some, after fertilization, petals will not fall from fruit and remain or persist with fruit. In pea, fruit is fleshy and forms a covering pouch for many seeds.

- 2) Custard apple is made up of many fruits, aggregated together. Each fruit part is thin, membranous with some granule like, which is edible. In mango outer skin and middle pulpy are edible and sweet. Inner most is with single seed.
- 3) In all above fruits, ovary, a lower most swollen part of pistil develops into a fleshy fruit. Ovules present inside the ovary gets transformed into a seed. These are change take place in flower after fertilization.
 - a) Both 1 and 2
 - b) Both 1 and 3
 - c) **Both 2 and 3**
 - d) All 1, 2 and 3

Explanation

A green part above fruits of brinjal and lady's finger are sepals of a flower. In some, after fertilization, sepal will not fall from fruit and remain or persist with fruit. In pea, fruit is not fleshy, but forms a covering pouch for many seeds.



29. Which among the following is not the post fertilization changes?

- a) Calyx sometimes persists with fruit
- b) Androecium sticks to seeds**
- c) Style and stigma fall off
- d) Ovules present inside the ovary develops into seeds

Explanation

The post fertilization changes and are: 1. Calyx sometimes persist with fruit 2. Petals wither / fall off 3. Androecium fall off. 4. Pistil remain and develops into a fruit. 5. Style and stigma fall off 6. Ovary enlarges to store food materials and develops into a fruit. 7. Ovules present inside the ovary develops into seeds.

30. The world's largest and heaviest seed is _____

- a) Double melon
- b) Double coconut**
- c) Double paddy
- d) Double corn

Explanation

The world's largest and heaviest seed is the double coconut. The seed looks like two coconut fused together. It only grows in two islands of the Seychelles. A single seed may be 12 inches long, nearly 3 feet in circumference and weighs about 18 kg.

31. Which have the smallest seeds in the plant kingdom?

- a) Vanda
- b) Lily
- c) Hibiscus
- d) Orchid**

Explanation

Orchids have the smallest seeds in the plant kingdom. 35 million seeds may weight only about 25 grams.

32. The production of new plants without the involvement of pollination and fertilization is knows _____

- a) Unisexual reproduction
- b) Bisexual reproduction
- c) Asexual reproduction**
- d) All the above

Explanation

Earlier we saw that plants reproduce not only from seeds but by other processes as well. The production of new plants without the involvement of pollination and fertilization is known as asexual reproduction.

33. Which among the following is not the types of asexual reproduction?

- a) Budding
- b) Fragmentation
- c) Spore formation
- d) **Fermentation**

Explanation

The types of asexual reproduction are 1. Vegetative Propagation, 2. Budding, 3. Fragmentation and 4. Spore formation.

34. The soft nature in bread and cakes are due to what reason?

- a) Bacteria
- b) **Yeast**
- c) Mold
- d) None of the above

Explanation

When we go to a bakery, we see so many types of cakes and breads. These are very soft in nature. This is due to the presence of Yeast.

35. Single yeast undergoes asymmetric division and produces a small protuberance which gradually grows and detaches from the parent cell. This process is called _____

- a) Spore formation
- b) Fragmentation
- c) **Budding**
- d) Vegetative propagation

Explanation

Single yeast undergoes asymmetric division. It produces a small protuberance which gradually grows and detaches from the parent cell. This process is called budding.

36. Which is a filamentous alga, when it matures, the filament divides into pieces and each fragment or piece of a filament will grow into a new filament or individual?

- a) **Spirogyra**
- b) Chlamydiae

- c) Firmicutes
- d) Eumycota

Explanation

In a pond we see so many algae. Spirogyra is a filamentous alga, when it matures, the filament divides into pieces. Each fragment or piece of a filament will grow into a new filament or individual. Likewise, Spirogyra produces so many young ones and this process is known as fragmentation.

37. Which among the following is not Vegetative Propagating plant?

- a) Potato
- b) **Corn**
- c) Sugarcane
- d) Yam

Explanation

In potato, shoot arise from eyes. Sugarcane, yam also grown like this. Vegetative parts of the plants such as root, stem and leaves can help to propagate the plant. Corn does not undergo vegetative propagation.

38. Which among the following is not non-flowering plant?

- a) Moss
- b) Ferns
- c) Algae
- d) **Water meal**

Explanation

Scarcity of water, high temperature, nutrient deficiency in soil etc., are unfavourable conditions. During these conditions non-flowering plants like Algae, Fungi, Moss and Ferns produces spores. They germinate into a new plant when favourable conditions are returns.

39. Carrot comes under which types of roots?

- a) Fibrous roots
- b) **Taproots**
- c) Parasite roots
- d) Adventitious roots

Explanation

Look at the part we usually consume as 'carrot vegetable'. However, it is not an unripe fruit, but the tap root of the carrot plant. We can see that the tap root of the carrot is swollen. In the case of the carrot plant, the tap root has a different characteristic than the usual pants.

40. Which among the following statement is correct

- 1) Normally, each plant organ, originally evolved to meet certain needs of the plant. For example, roots evolved primarily to anchor the plant and also absorb water and mineral nutrients from soil. Leaves were adapted to optimize photosynthesis. Stems evolved to reach out to sunlight and also served to conduct water from roots to leaves.
 - 2) However, in certain plant species, specific parts have evolved further in unusual and surprising ways to meet certain other specific needs, in some plants root, stem, and leaves change their shape and structure to perform special functions like storage of food, mechanical support, protection and other vital functions. This is known as modification.
 - 3) What appear as the 'leaf' of a cacti are actually their flower and what appear as 'spine' on them are actually stem. Its stems are modified into spines, an adaptation to reduce transpiration. Photosynthesis is performed by the stem part of the plant.
- a) Both 1 and 2
 - b) Both 1 and 3
 - c) Both 2 and 3
 - d) All 1, 2 and 3

Explanation

What appear as the 'leaf' of a cacti are actually their stem and what appear as 'spine' on them are actually leaf. Its leaves are modified into spines, an adaptation to reduce transpiration. Photosynthesis is performed by the stem part of the plant.

41. Which among the following is not the plant that stores food in roots?

- a) Radish
- b) Turnip
- c) Beet root
- d) None of the above

Explanation

Look at a radish, turnip, beet root, and carrot. They all grow under the soil. As soon as you pluck it from the ground if you wash them gently, you will notice small roots dangling from their surface. All these vegetables are in fact roots of the plant. Instead of thin slender roots, in case of such plants, the roots have become a place to store the food produced by them.

42. Which among the following is the example of spindle shaped root?

- a) Carrot
- b) Radish
- c) Beet root
- d) All the above

Explanation

One can notice that the tap root of radish is in the shape of spindle, swollen in the middle and tapering at both ends. Such type of modified roots is called spindle shaped root.

43. Which among the following is not Top shaped root?

- a) **Carrot**
- b) Turnip
- c) Beetroot
- d) None of the above

Explanation

At times, like in the case of turnip, and beet root the tap root can acquire a shape of top, that is spherical at the base and tapering shortly towards the apex. They are called as Top shaped root.

44. Carrot is an example of which type of roots?

- a) Spiral shaped root
- b) **Conical shaped root**
- c) Marrow shaped root
- d) Double tapped root

Explanation

In case of carrot, the shape is conical, broad at the apex and tapering gradually towards the base and such modified roots are called Conical shaped root.

45. Which among the following plant has mechanic support root?

- a) **Banyan**
- b) Papaya
- c) Neem
- d) All the above

Explanation

Look at a banyan tree. It seems to have many trunks supporting it. However, many of them are actually roots. As the banyan tree is large and huge, it needs support not to tilt and fall down. Many plants require such additional support. Such plants develop roots on their aerial parts to provide mechanical support. These roots grow downward and act as supportive organs.

46. Which among the following is not the modified root for support?

- a) Prop roots
- b) **Fixed roots**

- c) Stilt roots
- d) Climbing roots

Explanation

There are three types of modified roots for support. i. Prop roots, ii. Stilt roots and iii. Climbing roots.

47. A root growing from a location other than the underground, such as from a stem or leaf is called as _____

- a) Fibrous roots
- b) Taproots
- c) Parasite roots
- d) **Adventitious roots**

Explanation

A root growing from a location other than the underground, such as from a stem or leaf is called as adventitious root.

48. Banyan tree is an example of which among the following root?

- a) Climbing root
- b) **Prop root**
- c) Stilt root
- d) Sucking root

Explanation

Prop roots: Roots are modified to provide mechanical support as seen in Banyan tree. These roots grow vertically from horizontal branches of a tree.

49. Which among the following is not the example of stilt roots which gives additional support?

- a) Sugar cane
- b) **Black pepper**
- c) Maize
- d) None of the above

Explanation

In sugar cane, and maize adventitious roots arise from the nodes in cluster at the base of the stem. These roots are called stilt roots which gives additional support.

50. Which among the following is not the example of climbing roots?

- a) Betel

- b) Black pepper
- c) **Avicennia**
- d) None of the above

Explanation

Climbing roots: In betel and black pepper, nodes or inter nodes bear roots which help in climbing.

51. Which among the following is not the type of Modification of Roots?

- a) Roots for storage
- b) Mechanical support
- c) Gaseous exchange
- d) **Aerial modification**

Explanation

The four types of modification of roots are 1. Roots for storage, 2. Mechanical Support, 3. Gaseous Exchange and 4. Roots for other vital function.

52. Cuscuta a parasite plant is example of which among the following roots types?

- a) Pneumatophores
- b) **Haustoria**
- c) Phylloclade
- d) Rhizome

Explanation

Roots may also perform special function. Haustoria or Sucking roots, are one such example. Cuscuta a parasite plant, climb the trees and other vegetation and use the haustoria roots to penetrate the tissue of the host plant and suck nutrients from them. They are usually found in parasitic plants that depend on the host plants for nutrients.

53. Which is an epiphytic plant, which grows on trees and the velamen tissue present in the epiphytic root, absorbs moisture, to perform photosynthesis?

- a) Plumbago
- b) Ipomoea
- c) Iresene
- d) **Vanda**

Explanation

Vanda is an epiphytic plant, which grows on trees. The velamen tissue present in the epiphytic root, absorbs moisture, to perform photosynthesis.

54. Which is a tree which grows in mangroves or swamps that have roots which are seen above the ground for the purpose of gaseous exchange?

- a) Mahogany
- b) Rhododendron
- c) Cedar
- d) **Avicennia**

Explanation

Avicennia is a tree which grows in mangroves or swamps. They have roots which are seen above the ground for the purpose of gaseous exchange. These roots are erect, peg like structures with numerous pores through which air circulates. These roots are called breathing roots, or pneumatophores.

55. Which among the following is not the stem?

- a) Ginger
- b) Onion bulb
- c) Potato
- d) **None of the above**

Explanation

Can you guess what is common between ginger, onion bulb, potatoes. All three are stems. Some plants have their stems modified for storing food and for vegetative propagation. Modified stem may be aerial, subaerial or underground stems.

56. Which among the following is not the Sub – aerial Modifications stem types?

- a) **Phylloclade**
- b) Runner
- c) Stolon
- d) Sucker

Explanation

Stem of some plants remains sub – aerial which grow horizontally on the surface of the soil for the purpose of reproduction. There are four types. 1. Runner, 2. Stolon, 3. Sucker and 4. Offset.

57. Which among the following is the example of runner stem?

- a) Wild strawberry
- b) **Centella**
- c) Chrysanthemum
- d) Eichhornia

Explanation

Runner: The stem grows laterally on the surface of the soil, breaks up to produce roots where it touches the ground to give rise to new plants. E.g: Centella (Vallarai).

58. Which is a short and thick branch that arises from the axial part of a leaf and has thick internodes and produces a tuft of leaves and cluster of small roots below?

- a) Runner
- b) Stolon
- c) Sucker
- d) **Offset**

Explanation

An offset is a short and thick branch that arises from the axial part of a leaf. It has thick internodes. It produces a tuft of leaves and cluster of small roots below. E.g: Eichhornia.

59. Which among the following is the example of stolon?

- a) Colocasia
- b) Wild strawberry
- c) **Chrysanthemum**
- d) Potato

Explanation

Sucker is a short and weak lateral branch that grows diagonally upwards and directly gives rise to a new shoot. E.g: Chrysanthemum.

60. Cactus is an example of which among the following stem modification?

- a) Stolon
- b) **Phylloclade**
- c) Rhizome
- d) Bulb

Explanation

Phylloclade: In dry climate, conserving water is a challenge. Water evaporates from the surface. If the surface area is larger, evaporation would be more; and if the surface area is smaller, the evaporation will be less. Plants with many leaves have more surface area. Cactus hence has a thick stem which does most of the food production through photosynthesis and leaves are reduced to small spines with less surface area.

61. Which is a slender branch of the stem that grows upwards to some distance and then bends towards the ground and upon touching the ground, it gives rise to a new plant?

- a) **Stolon**
- b) Rhizome
- c) Bulb
- d) Corm

Explanation

Stolon is a slender branch of the stem that grows upwards to some distance and then bends towards the ground. Upon touching the ground, it gives rise to a new plant. E.g: Wild strawberry.

62. Which among the following is not the underground stem types?

- a) Corm
- b) **Spines**
- c) Tuber
- d) Bulb

Explanation

In aerial and sub aerial modifications, stem has indefinite growth. In underground modified stem, whole stem is buried under the ground and it has definite growth. Usually stem grows above the ground, but there are some stems that grow under the ground to store food. These underground stems swell and become thick. There are four types of underground stems: 1. Rhizome; 2. Corm; 3. Tuber; 4. Bulb.

63. Which is an enlarged, spherical underground stem that stores food and has many dormant buds on its surface known as "Eyes"?

- a) Rhizome
- b) Corm
- c) **Tuber**
- d) Bulb

Explanation

Tuber is an enlarged, spherical underground stem that stores food. It has many dormant buds on its surface known as "Eyes". If we plant a part of tuber with the bud, it grows into a new plant.

64. Which among the following is the example of tuber stem?

- a) **Potato**
- b) Ginger
- c) Turmeric

d) Garlic

Explanation

Potato is an example of Tuber.

65. Which is an underground thick stem with nodes and internodes with scale leaves at the node and grows horizontally and has an irregular shape?

- a) **Rhizome**
- b) Corm
- c) Tuber
- d) Bulb

Explanation

Rhizome is an underground thick stem with nodes and internodes with scale leaves at the node. It grows horizontally and has an irregular shape. Rhizome have buds. If give rise to new stem and leaves.

66. Which is underground stem round in shape and flat at the top and bottom. It is a condensed form of rhizome and bears one or more buds in the axils of scale leaves?

- a) Rhizome
- b) **Corm**
- c) Tuber
- d) Bulb

Explanation

Corm is an underground stem which is round in shape and flat at the top and bottom. It is a condensed form of rhizome and bears one or more buds in the axils of scale leaves. Daughter plants arise from their buds.

67. Which among the following is not the example of Rhizome?

- a) Ginger
- b) **Onion**
- c) Turmeric
- d) None of the above

Explanation

Ginger and Turmeric are example of Rhizome.

68. Which among the following is the example of Corm?

- a) Garlic
- b) Onion
- c) **Colocasia**
- d) All the above

Explanation

Colocasia is an example of corm.

69. Which is a condensed stem which is disc like and stores food in the fleshy leaves?

- a) Rhizome
- b) Corm
- c) Tuber
- d) **Bulb**

Explanation

Bulb is a condensed stem which is disc like and stores food in the fleshy leaves.

70. The bulb has how many types of leaf?

- a) **Two**
- b) Three
- c) Four
- d) Six

Explanation

The bulb has two types of leaves. 1. Fleshy Leaves 2. Scaly Leaves. The upper part of the stem has a terminal bud and it is covered by many scaly leaves. The inner fleshy leaves store food as seen in Garlic and Onion.

71. Which among the following is not the modifications of leaf?

- a) Spines
- b) Tendrils
- c) Traps
- d) **Moles**

Explanation

Plants have changed themselves to adapt to the environment they grow. One of them is the modification of leaves. Leaves of several plants get modified into different form based on the purpose and environment. They are i. Spines, ii. Tendrils, iii. Phyllode and iv. Traps.

72. Which among the following is the example of traps leaf?

- a) Opuntia
- b) Pea
- c) **Nepenthes**
- d) Acacia

Explanation

Nepenthes is the example of Traps.

73. Plants like Nepenthes have which deficiency that makes them adopt to be traps?

- a) Oxygen
- b) Hydrogen
- c) Carbon
- d) **Nitrogen**

Explanation

Plants that grow in nitrogen deficient places adapt themselves well to get it. In Nepenthes, the leaves are modified into a flask like structure, which is used to attract insects and other tiny animals. The inner wall of the leaf secretes digestive enzymes that help to digest the insects and extract the nitrogen needed for the plant. Eg: Nepenthes.

74. Which among the following statement is incorrect

- 1) Phyllode: In *Acacia auriculiformis*, petioles expand to form leaf like structure. They carry out the function of leaf (Photosynthesis).
 - 2) Tendrils: In climbers, the leaf of plant would be modified into elongated structure to help the plants climb efficiently. 1. *Gloriosa superba* – Leaf tips are modified into tendrils 2. *Pisum sativum* (pea) – Terminal leaflets are modified into tendrils.
- a) Only 1
 - b) Only 2
 - c) Both 1 and 2
 - d) **None**

75. Which among the following is the example of spines (Modifications of Leaf)?

- a) Perennial
- b) **Opuntia**
- c) *Spiraea*
- d) *Clethra*

Explanation

Leaves are reduced to spines, and the stem is modified into green succulent part to perform photosynthesis. Eg : *Opuntia*