

BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

VEGETATIVE MORPHOLOGY

Text Evaluation Questions Solved Choose The Correct Answer

1. Which of the following is polycarpic plant?

A. Mangifera

B. Bambusa

C. Musa

D. Agave

Answer: A



2. Roots are

A. descending, negatively geotrophic, positively phototrophic

B. descending, positively geotrophic, negatively phototrophic

- C. ascending, positively geotrophic, negatively phototrophic
- D. ascending, negatively geotrophic, positively phototrophic

Answer: B



3. Bryophyllum and Dioscorea are example for

A. foliar bud, apical bud

- B. foliar bud, cauline bud
- C. cauline bud, apical bud
- D. cauline bud, foliar bud

Answer: B



4. Which of the following is correct statement?

A. In Pisum sativum leaflets modified into tendrils

B. In Atalantia terminal bud is modified into thorns

C. In Nepenthes midrib is modified into lid

D. In Smilax inflorescence axis is modified into tendrils.



- 5. Select the mismatch pair
 - A. (a) Sagittaria (i) Heterophylly
 - B. (b) Lablab (ii) Trifoliolate
 - $C. \ (c \) \ Begonia \quad (iii) \ Leaf \ mosaic$
 - D. (d) Allamanda (iv) Ternate phyllotaxy

Answer: D

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6. Draw and label the parts of regions of root.

- 7. Write the similarities and differences between
- 1. Avicennia and Trapa
- 2. Radical buds and foliar buds
- 3. Phylloclade and cladode

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8. How root climbers differ from stem climbers?

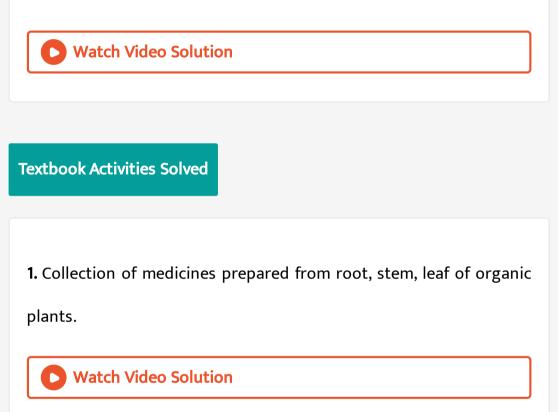


9. Compare sympodial branching with monopodial branching.



10. Compare pinnate unicostate venation and palmate multicostate

venation.



2. Prepare a report of traditional medicines.

3. Growing micro greens in class room- project work. (Green seed

sprouts)



Additional Questions Solved I Multiple Choice Questions

1. The study about external features of an organism is known as

A. morphology

B. anatomy

C. physiology

D. taxonomy

Answer: A

2...... deals with the study of shape, size and structure of plant parts.

A. External morphology

B. Internal morphology

C. External anatomy

D. Internal anatomy

Answer: A

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3. The branch of science that deals with the classification of organisms is called as

A. taxonomy

B. morphology

C. physiology

D. anatomy

Answer: A

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4. deals with the study about the root and shoot system.

A. Vegetative morphology

B. Reproductive morphology

C. External morphology

D. Internal morphology

Answer: A



5. deals with the study about flowers, fruits and seeds

of a plant.

A. Reproductive morphology

B. Vegetative morphology

C. External morphology

D. Internal morphology

Answer: A



6. The general form of a plant is referred to as

A. habitat

B. structure

C. habit

D. shape and size

Answer: C

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7. are soft stemmed plants with less wood or no wood.

A. Shrubs

B. Trees

C. Herbs

D. Climbers

Answer: C



8. Perennial herbs having a bulb, corm, rhizome or tuber as the

underground stem are termed as

A. thallophytes

B. rhodophytes

C. geophytes

D. cyanophytes

Answer: C

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9. Climbers are also called as

A. herbs

B. trees

C. vines

D. shrubs

Answer: C

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10. is a perennial, woody plant with several main stems

arising from the ground level.

A. Herb

B. Runner

C. Climber

D. Shrub

Answer: D

11. is an example for vines.

A. Hibiscus

B. Phyllanthus

C. Palmyra (

D. Ventilago

Answer: D

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12. grows on rocks.

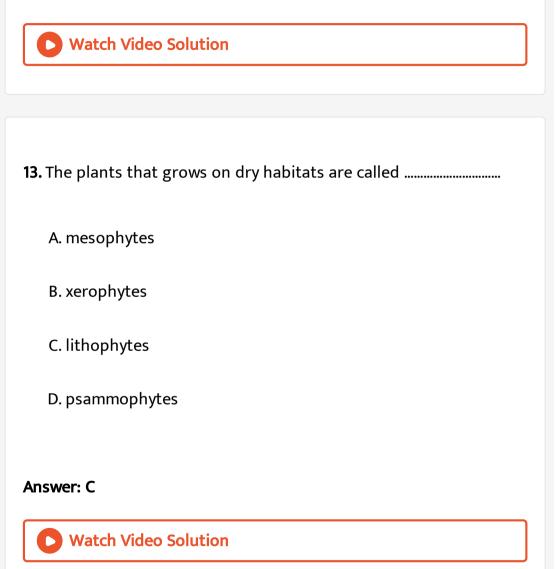
A. Mesophytes

B. Lithophytes

C. Xerophytes

D. Psammophytes

Answer: B



14. Mesophytes grows on.....

A. sand

B. soil with sufficient water

C. rocks

D. dry habitats

Answer: B

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15. grows on sand.

A. Mesophytes

B. Psammophytes

C. lithophytes

D. xerophytes

Answer: B

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16. Azadirachta indica is an example for
A. psammophytes
B. mesophytes
C. lithophytes
D. xerophytes
Answer: B
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17. Ipomoea pes-caprae is an example for

A. mesophytes

B. Psammophytes

C. Lithophytes

D. Xerophytes

Answer: B

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18. psammophytes is an example for xerophytes.

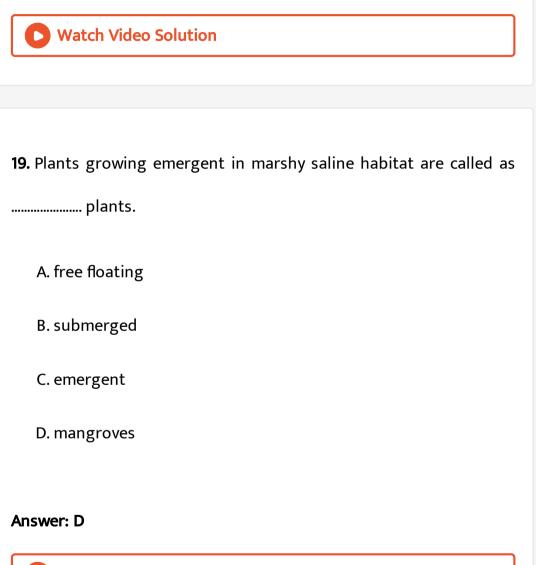
A. Lichens

B. Euphorbia

C. Ficus

D. Ipomoea

Answer: B



20. type of aquatic plants with roots or stems are anchored to the substrate under water with aerial shoots growing above water.

A. Submerged

B. Free floating

C. Emergent

D. Mangroves

Answer: C

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21. Hydrilla and Vallisneria are the examples of type of aquatic plant

A. Emergent

B. free floating

C. submerged

D. mangroves

Answer: C

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22. Plants that grows completely under water are called astype of aquatic plants.

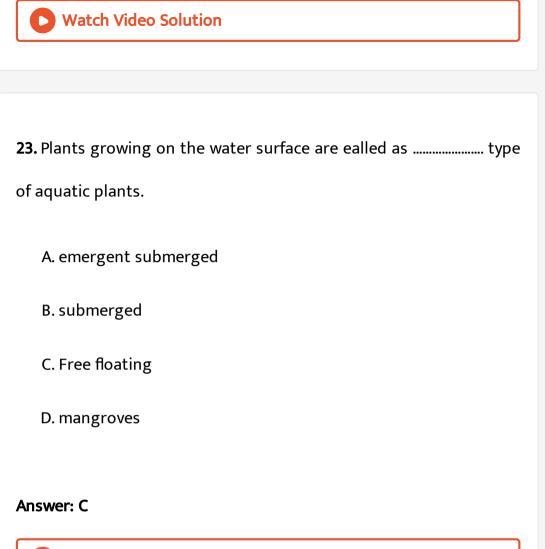
A. Emergent

B. free floating

C. submerged

D. mangroves

Answer: C



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24. Therophyte is a plant that completes its life cycle in

growing season.

A. One

B. two

C. three

D. several

Answer: A

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25. A plant that grows vegetatively during the first season and undergoes flowering and fruiting during the second season is called

as

A. biennial

B. therophyte

C. perennial

D. geophyte

Answer: A



26. Spinach, carrot and lettuce are the examples of

A. biennial

B. annual

C. geophytes

D. ephemerals

Answer: A

27. A plant that grows for many years that flowers and set fruits for several season during the life span is called as

A. geophytes

B. annual

C. biennial

D. ephemerals

Answer: A

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28. When perennial plants bear fruits every year they are called as

A. Polycarpic

......

B. ephemerals

C. annual

D. therophyte

Answer: A

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29. Talipot palm, Bamboo and Agave are examples of

A. polycarpic geophytes

B. therophytes

C. monocarpic geophytes

D. biennial

Answer: C

30. Watermelon is a/an plant.

A. biennial

B. perennial

C. geophytes

D. ephemeral

Answer: D

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31.....is an example for polycarpic perennial.

A. Peas

B. Fennel

C. Agave

D. Sapota

Answer: D

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32. Flowering plants are also called as
A. sporophytes
B. thallophytes
C. magnoliophytes
D. phaeophytes
Answer: C
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33. The part of a plant that arises from radicle is

A. stem

B. root

C. bud

D. flower

Answer: B



34. Root cap is made up of cells.

A. Parenchyma

B. collenchyma

C. selerenchyma

D. chlorenchyma

Answer: A



35. In..... plant multiple root cap is seen.

A. Pandanus

B. Pistia

C. Bougainvillea

D. Pea

Answer: A

36. Root pockets are seen in

A. Pandanus

B. Pistia

C. Bougainvillea

D. Pea

Answer: B

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37. In zone of the root, the cells get differentiated.

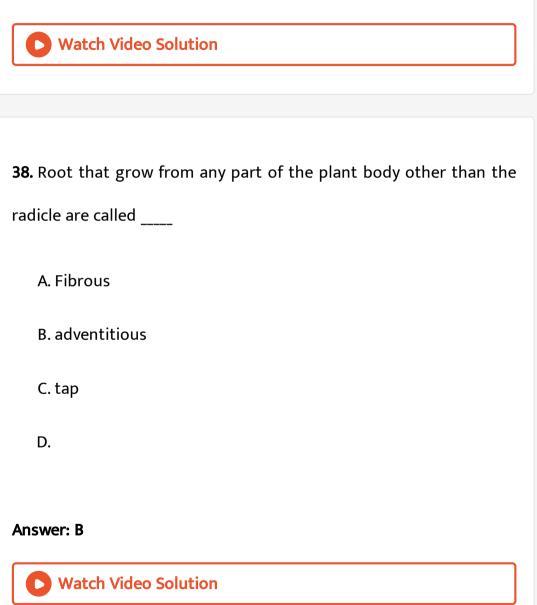
A. Root hair zone

B. Elongation zone

C. Meristematic zone

D. Maturation zone

Answer: D



39. Match the following topics with correct examples.

a Beta vulgarisb Daucus carotac Avicenniad Raphanus sativusi. Breathing rootii. Napiform rootiii. Fusiform root

A. $a - iv \quad b - ii \quad c - i \quad d - iii$

B. a - i b - ii c - iii d - iv

C. $a - iv \quad b - iii \quad c - ii \quad d - i$

D. a - ii b - iv c - i d - iii

Answer: D

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40. The cells of this region undergo active cell division

A. root hair zone

B. maturation zone

C. elongation zone

D. meristematic zone

Answer: D

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41. Tap root system develops from this part of embryo

A. plumule

B. colcoptile

C. node

D. radical

Answer: D

42. Negatively geotropic roots are seen in plant like

A. Beta vulgaris

B. Hibiscus

C. Rhizophora

D. Euphorbia

Answer: C

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43. Respiratory roots are found in

A. Sweet potato

B. Bruguiera

C. Mango

D. Dahlia

Answer: B

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44. Beaded root are also called as
A. annulated
B. moniliform
C. tuberous
D. fasciculated
Answer: B
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45. Match the followings.

- RootsExplanationa. Tuberousi. Roots swelling occurs only near the tipsb. Fasciculatedii. Roots swell at regular interavlsc. Beadediii. Roots are in cluster from the base of the stemd. Noduloseiv. Roots are swoollen without any definite shape
 - v. Roots have ring like swelling at regula intervals

A.
$$a-iv$$
 $b-v$ $c-i$ $d-iii$

B.
$$a-i$$
 $b-ii$ $c-iii$ $d-iv$

C. $a - iv \quad b - iii \quad c - ii \quad d - i$

$$\mathsf{D}.\ a-ii\ b-iv\ c-ii\ d-i$$

Answer: C

46. Match the followings.

Root types	Examples
a. Annulated	i. Turmeric
b. Nodulose	ii. Ipomoea
c. Tuberous	iii. Dahlia
d. Fasciculated	iv. Indian spinach
e. Beaded	v. Ipecac
	vi. Radish

A. $a - iv \quad b - ii \quad c - i \quad d - iii \quad e - vi$

B. a - i b - ii c - iii d - iv e - v

C.
$$a-iv$$
 $b-iii$ $c-ii$ $d-i$ $e-vi$

D. a - v b - i c - ii d - iii e - iv

Answer: D

47. The roots that grows vertically downwards from the lateral branches into the soil is called as roots.

A. Brace

Β.

C. climbing

D. buttress

Answer: D

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48. roots are thick roots growing obliquely from the basal

nodes of their main stem.

A. Pillar

B. stilt

C. buttress

D. prop

Answer: B

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49. Clasping roots are also called as

A. Pillar

B. Stilt

C. Clinging

D. Buttress

Answer: C

50. Match the following.

Root types	Examples
a. Foliar root	i. Tinospora
b. Haustorial root	ii. Vanda
c. Photosynthetic root	iii. Bryophyllum
1 1 1 1 1 1	· O

d. Epiphytic root iv. Cuscuta

A. $a - iv \quad b - ii \quad c - i \quad d - iii$

B. a - i b - ii c - iii d - iv

C. a - iii b - iv c - i d - ii

 $\mathsf{D}.\ a-v\quad b-i\quad c-ii\quad d-iii$

Answer: C



51. Which part of embryo develops into stem?

A. Radicle

B. Micropyle

C. Osita

D. Plumble

Answer: D

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52. The point from which leaf arises is called as

A. internode

B. intranode

C. node

D. code

Answer: C



53. Which is not a character of stem ?

A. Exogenous branches

B. Descending portion

C. Nodes

D. Buds

Answer: B

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54. Which is not a function of stem?

A. Support

B. Transport of food

C. Transport of water

D. Absorption of water

Answer: D

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55. Which is the primary function of stem?

A. Storage

B. Perennation

C. Photosyntheysis

D. Water transport

Answer: D

56. Collateral bud is a bud.

A. terminal

B. lateral

C. extra axillary

D. accessory

Answer: D

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57. Cauline buds arise from

A. root

B. stem

C. leaf

D. nodes

Answer: B



58. Which of the following plant produces bulbils ?

A. Bryophyllum

B. Begonia

C. Allium proliferum

D. solanum americanum

Answer: C

59. plants produce foliar buds.

A. Allium

B. Solanum

C. Citrus

D. Begonia

Answer: D

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60. Radical buds develop from

A. root

B. stem

C. leaf

D. plumule

Answer: A

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61. In Polyalthia longifolia, the stem is
A. decurrent
B. caudex
C. excurrent
D. culm
Answer: C
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62. Which of the following is not a creeper?

A. Cynodon

B. Oxalis

C. Indigofera

D. Centella

Answer: C

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63. Clockwise coiling climbers are called

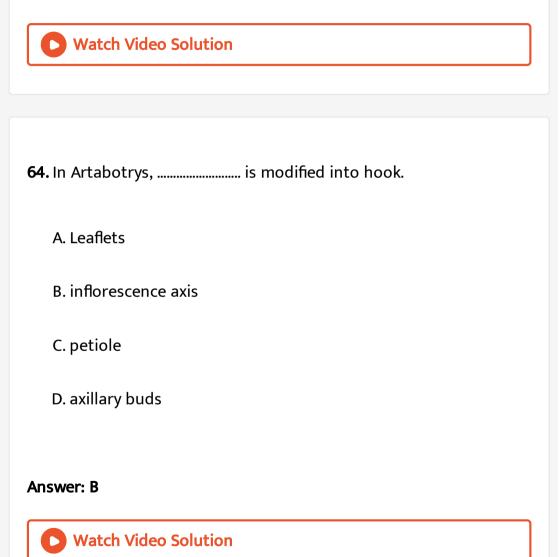
A. hexos

B. dextrose

C. ministrose

D. sinistrose

Answer: B



65. are woody stem climbers.

A. Lianas

B. Tendrils

C. Phylloclade

D. Phyllode

Answer: A

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66. is a characteristie adaptation of xerophytes.

A. Hook

B. Thorn

C. Cladode

D. Phylloclade

Answer: D

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67. Flattened cladode is present in
A. Asparagus
B. Atalantia
C. Carissa
D. Ruscus
Answer: D
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68. Musa is an example for

A. climber

B. runner

C. stolon

D. sucker

Answer: D

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69. Eichhornia exhibit type of stem modification.

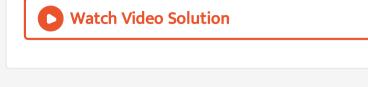
A. stolon

B. offset

C. runner

D. sucker

Answer: B



70. Underground stems are generally called as

A. root caps

B. root stocks

C. root pockets

D. root modification

Answer: B

71. Which is not a charaeter of root stock?

A. Nodes

B. Internodes

C. Terminal bud

D. Root cap

Answer: D

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72. Which is an example for compound tunicated bulb ?

A. Allium cepa

B. Allium sativum

C. Tulipa sps

D. Bulbophyllum

Answer: B



73. is a pseudobulb.

A. Allium cepa

B. Allium sativum

C. Tulipa sps.

D. Bulbophyllum

Answer: D

74. is a horizontally growing underground stem.

A. Corm

B. Rhizome

C. Bulb

D. Tuber

Answer: B

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75. All the leaves of a plant together called as

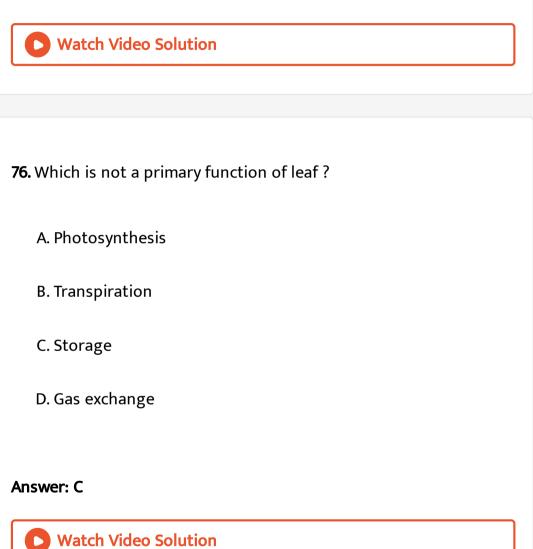
A. phyllome

B. phyllode

C. phylloclade

D. phyllanthus

Answer: A



77. Lamina of leaf is called as

A. hypopodium

B. mesopodium

C. endopodium

D. epipodium

Answer: D

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78. Swollen, broad leaf base is called as

A. phyllome

B. pulvinus

C. stipule

D. bract

Answer: B

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79. Pulvinus is a characteristic feature of
A. Malyaceae
B. Fabaceae
C. Musaceae
D. Solanaseae
Answer: B
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80. Stalk of leaf is called as

A. pedicel

B. petiole

C. phylum

D. perianth

Answer: B

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81. Poaceae is seen in family.

A. Malvaceae

B. Fabaceae

C. Musaceae

D. Solanaceae

Answer: C



82. Which of the following plant possess sessile leaves ?

A. Hibiscus

B. Mangifera

C. Psidium

D. Gloriosa

Answer: D

83. Arrangement of veins on lamina is called

A. venation

B. aestivation

C. placentation

D. phyllotaxy

Answer: A

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84. Parallel venation is the characteristic feature of

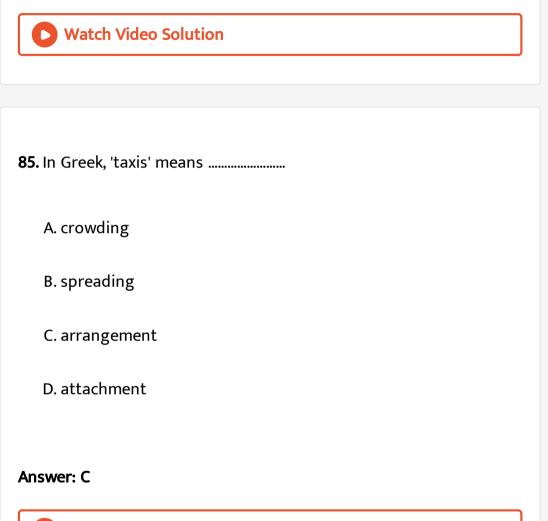
A. angiosperms

B. gymnosperms

C. dicots

D. monocots

Answer: D



86. Palmately parallel divergent venation is seen in

A. Carica papaya

Β.

C. Borassus flabellifer

D. Zizyphus

Answer: B

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87. Spiral arrangement of leaves show vertical rows called

A. decussate

B. bifarious

C. orthostichies

D. distichous

Answer: C



88. Nerium exhibits phyllotaxy.

A. Ternate

B. whorled

C. decussate

D. alternate

Answer: A

89. In Allamanda, phyllotaxy is seen.

A. Ternate

B. verticillate

C.

D. alternate

Answer: B

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90. The secondary rachii are called as

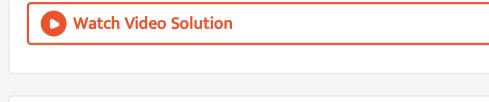
A. stipel

B. ligule

C. petiole

D. pinnae

Answer: D



91. Tripinnate compound leaves are seen in

A. Citrus

B. Oxalle

C. Oroxylum

D. Allamanda

Answer: C

92. In Gloriosa, is modified into tendril.

A. apical leaflet

B. entire leaf

C. leaf tip

D. petiole

Answer: C

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93. In Euphorbia, are modified into spines.

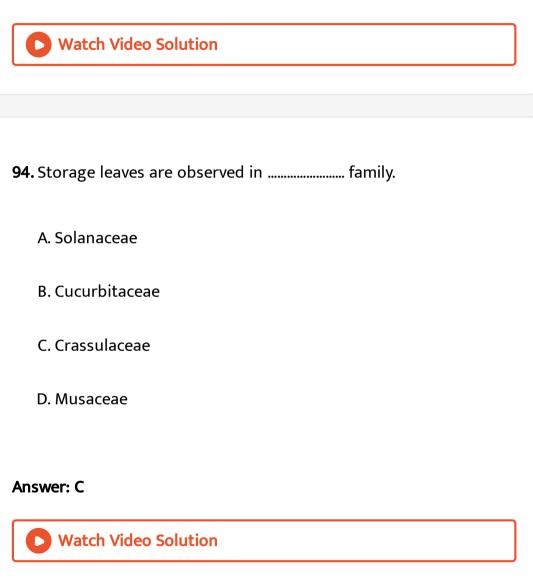
A. stipels

B. ligules

C. stipules

D. petiole

Answer: C



95. Phyllodes are the modification of

A. pedicel

B. pinnae

C. petiole

D. stipule

Answer: C

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96. is an example for pitcher.

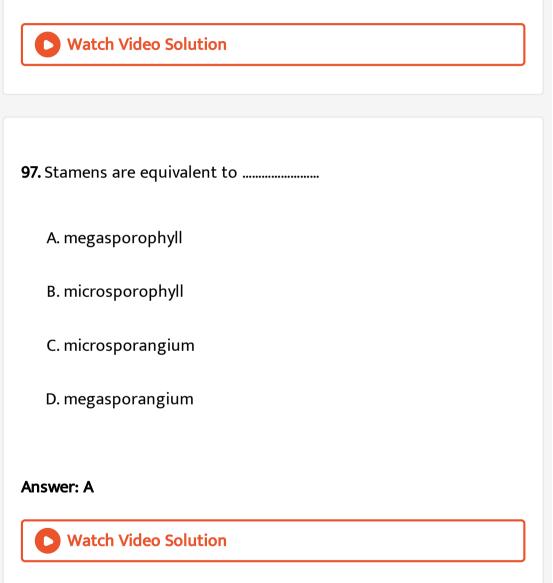
A. Sarracenia

B. Acacia

C. Parkinsonia

D. Sedum

Answer: A



98. Rolling or folding of individual leaves is called

A. venation

B. phyllotaxy

C. ptyxis

D. branching

Answer: C

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99. In Mimusops, the leaves are

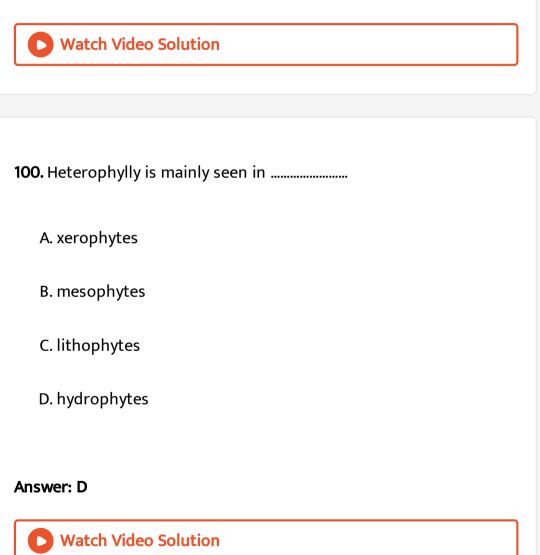
A. fagacious

B. evergreen

C. deciduous

D. marcescent

Answer: B



101. Isobilateral leaf is seen in

A. onion

B. pine

C. tridax

D. grass

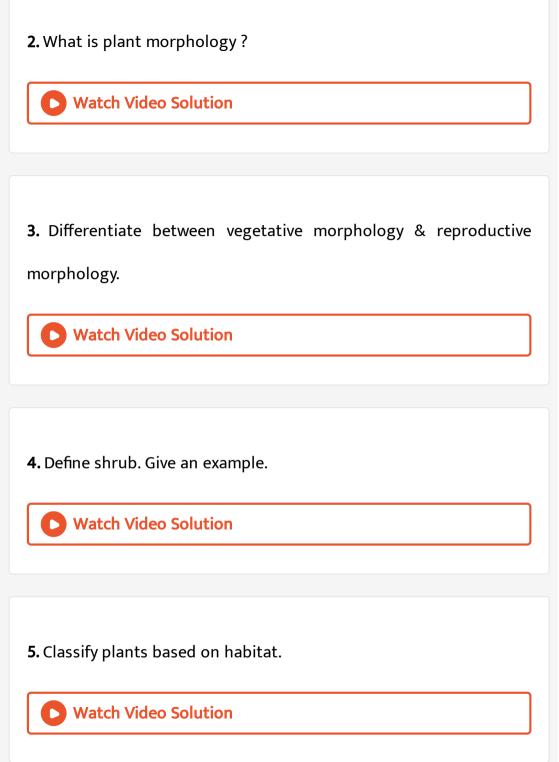
Answer: D



Additional Questions Solved Ii Very Short Answer Type Questions

1. Define morphology.





6. Distinguish between terrestrial and aquatic plants.

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7. Classify the terrestrial plants based on their adaptation.
• Watch Video Solution

8. What do you mean by caudex ?

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9. What is a liana ? Mention its importance.

10. What are therophytes ?

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11. Name the two primary functions of roots.



12. Where does the roots develop from ?

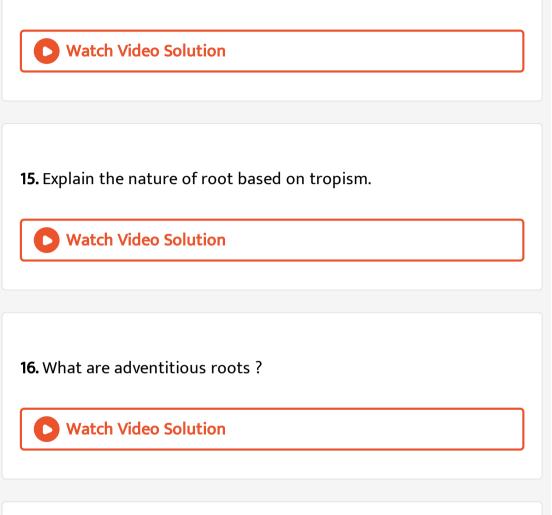
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13. Give an example for (a) Free floating plants (b) Submerged plants

(c) Mangroves and (d) Emergent plants ?



14. What is root cap?



17. Why do roots modify their structure ? Name the types of root

modification.

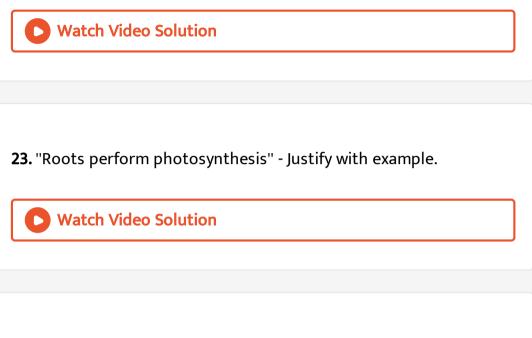


18. Name the places from which adventitious roots arise.

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19. What are prop roots ? Give an example.
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20. How velamen helps the Vanda plant ?
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21. Which type of adventitious roots are seen in Bryophyllum plants

22. How Cuscuta survives ?



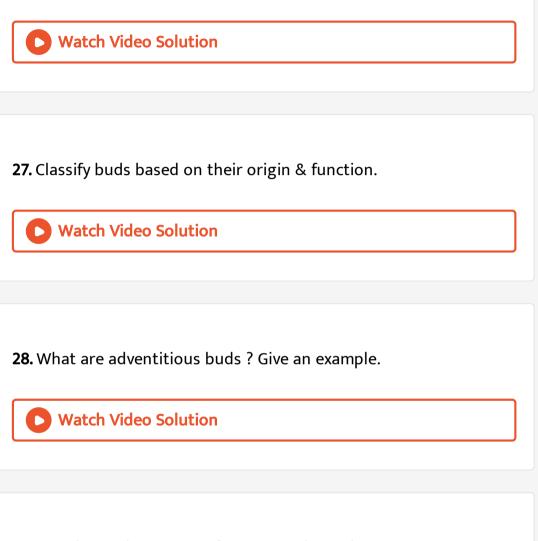
24. Which part of embryo gives rise to root and shoot ?

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25. Define node & internode.

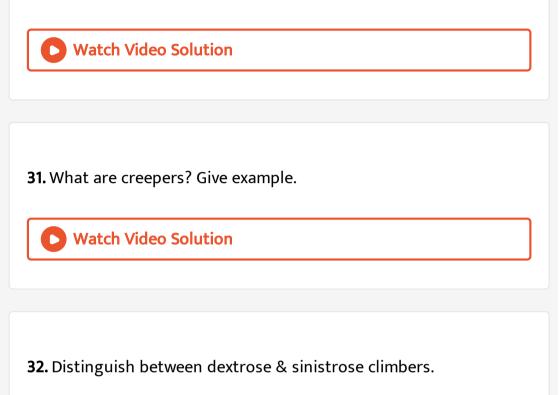


26. Explain stem based on tropism.



29. Mention various types of stem seen in angiosperms.

30. Why do certain plants climb?

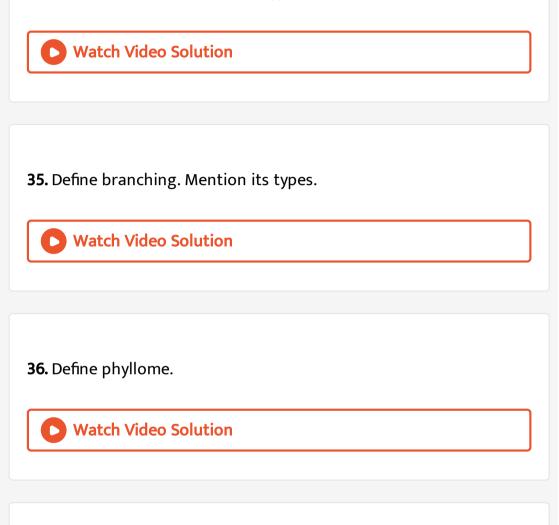


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33. What are root stocks ? What are its function?



34. What is a bulb ? Mention its types.



37. List out any four primary functions of leaves.



38. What is a leaf base ?

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39. What is pulvinus ?

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40. Which leaf part acts a bridge between leaf & stem ? Define.

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41. Mention the types of leaves based on petiole.

42. What are stipules ? State its functions.

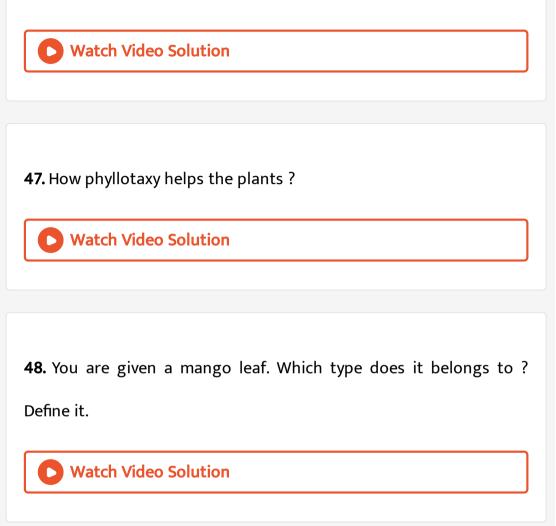
• Watch Video Solution
43. Define venation. Mention its types.
• Watch Video Solution

44. Define ligule.

> Watch Video Solution

45. What are stipulate & exstipulate leaves ?

46. Define phyllotaxy. Mention its types.



49. Define heterophylly. Which type of plants show this adaptation ?

50. When a leaf is said to be centric?

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51. Which type of leaf is common among monocots ? Define it.

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52. Define ptyxis.

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53. Classify plants based on habit.



54. Musa is a monocarpic perennial. Give possible reason.

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55. What are the parts that constitute the typical leaf ?
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56. What is a pseudobulb ?
Watch Video Solution
57. Which factor determines the branching patterns ?

58. Mention the secondary functions of leaf with an example for

each.

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59. List out the families that possess sheathing leafbase.
Watch Video Solution
60. What are stipels ?
Watch Video Solution
61. Compare the stem nature of Corm and Rhizome
Watch Video Solution

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2. Differentiate between polycarpic and monocarpic perennial.

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3. List down the key difference between roots and shoots.



4. Name the three distinct zones of root.

5. Draw and label the parts of regions of root.

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6. Give a brief account on tap root system.
Watch Video Solution
7. Describe fibrous root system.
Watch Video Solution
8. Briefly explain the development process of leaf primordium.
Watch Video Solution

9. Name the three types of Adventitious buds.

Watch Video Solution 10. Write a brief note on Bulbils. Watch Video Solution **11.** How root climbers differ from stem climbers? Watch Video Solution

12. Explain the three different types of trailers with an example.



13. Cladode is a stem modification. Comment on it.

Watch Video Solution 14. Comment on Corm with an example. Watch Video Solution **15.** Differentiate between monopodial and sympodial branching. Watch Video Solution 16. Draw a leaf and label the parts.

17. Describe the pattern of leaf arrangement in mosaic leaf.

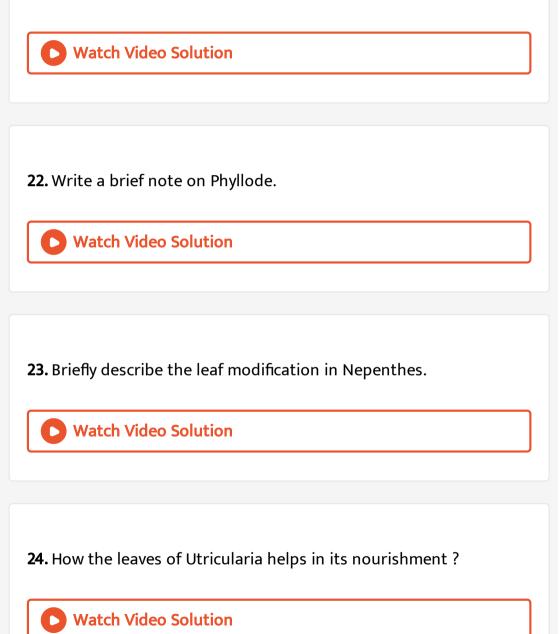
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18. How the leaf hooks helps the Bignonia plant ?
Watch Video Solution
19. Which types of plants develop tendril ? How does it helps the plant ?

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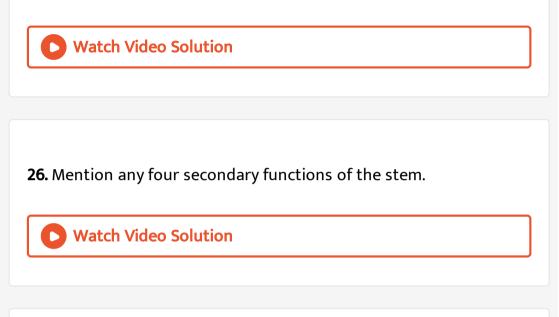
20. Rosa species plants are not eaten by herbivores. Why?

21. Certain plants like Aloe and Agave can survive in extreme dry

conditions. How ?



25. What do you understand by the term developmental heterophylly.



27. Make a tabular column showing types of terrestrial plants and

their environmental adaptation with examples.



Additional Questions Solved Iv Long Answer Type Questions

1. Make a list of aquatic plants and their environmental adaptation

with an example.

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2. Name the three distinct zones of root.
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3. Draw a flow chart depicting the various types of root modification.
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4. Describe the tap root modification for storage purpose with diagram.

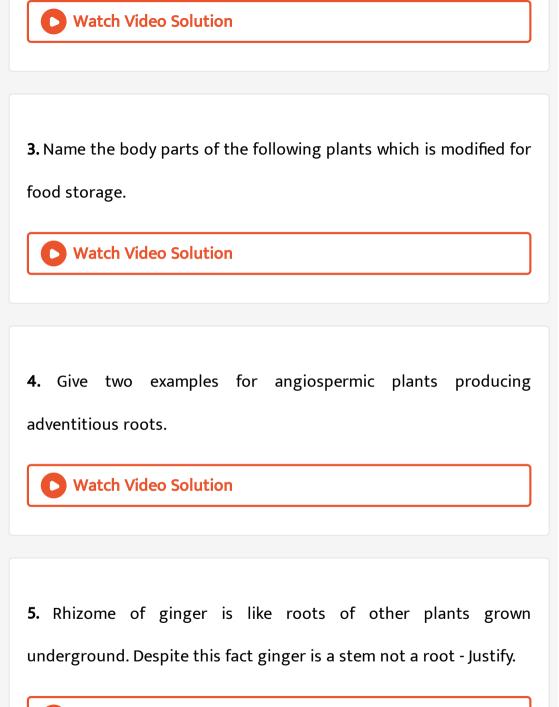
5. Define bud. Explain the types of buds based on location.

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6. Draw a flow chart illustrating stem modifications.
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7. List out the characteristics of leaf.
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8. Define phyllotaxy. Mention its types.

9. Define ptyxis.

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10. How are leaves classfied based on their duration?
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Additional Questions Solved V Higher Order Thinking Skills Hots
1. Roots are non-green coloured. Is there is any green coloured root
? Explain.

2. Which part of ginger and onion are edible ?



6. Vanda is an epiphyte. Epiphytes are the plants growing on branches of trees. They do not have direct contact with soil. How they obtain water for its photosynthetic activity ?

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7. How does a pneumatopore work ?
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8. Carnivorous plants like Nepenthes have nutritional adaptations.

Which part of Nepenthes plant is modified to solve this problem ?



9. Why do we use the term 'monocarpic perennial' for Musa?

