

# **BIOLOGY**

# **BOOKS - NIKITA PUBLICATION**

# MORPHOLOGY OF FLOWERING PLANTS

Exercise

**1.** The stem, branches, leaves and flowers are the parts of

B. Shoot system C. Stilt root system D. Adventitious root system **Answer: Watch Video Solution** 2. Roots are meant for A. anchoring

A. Root system

- B. absorption of water, minerals
- C. both a and b
- D. protection



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3. Rearrange the following zones as seen in the root in vertical section and choose the correct option (A) Root hair zone (B) Zone of

meristems (C) Root cap zone (D) Zone of maturation (E) Zone of elongation

A. A, B, C, D, E

B. C, B, E, A, D

C. D,E,A,C,B

D. E,D,C,B,A

# Answer:



# 4. The stem bears

- A. leaves for photosynthesis
- B. flowers, fruits, seeds for reproduction
- C. both a and b
- D. roots for support

#### **Answer:**



**5.** Roots are generally

A. positively geotrophic

B. negatively phototrophic

C. positively hydrotropic

D. all of these

## Answer:



6. Generally roots do not have

A. apical or terminal buds

B. axillary buds

C. nodes and internodes

D. all of these

#### **Answer:**



7. Root cap is present at the tip of root for

A. protection from bacteria

B. protection from toxic compound

C. protection from nematodes

D. protection from mechanical injury

#### **Answer:**



**8.** In hydrogphytes like Eichornia, Pistia root caps are

A. present at the tip

B. present behind merstem

C. present at the base of stem

D. absent and root pockets are present

#### **Answer:**



**9.** Which of the following part of root secrete mucilage for lubrication to prevent wear & tear

A. meristem zone

B. zone of elogation

C. root horizon

D. root cap

#### **Answer:**



**10.** Lateral roots arises from zone of maturation developed

- A. exogenously
- B. endogenously
- C. perigynously
- D. perigenously

## **Answer:**



- **11.** Which of the following is wrong about fibrous root system
  - A. these are developed from any other part than radical
  - B. these are generally developed form base of stem, nodes or form leaves
  - C. in monocot radical short lived and fibrous roots arises from base of stem
  - D. radical forms fibrous root system



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**12.** Which of the following is incorrect about tap root

A. developed from radical of embryo they are primary and persistant

B. grows down wards and develop primary, seondary teritiary branches

C. deeply seated or superficial

D. they are arising from basal of stem and not form radical

## **Answer:**



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**13.** Root hairs are developed at zone of maturation, root hair

A. decrease rate of absorption

- B. helps in fixation of plant
- C. to give mechanical support
- D. increase area of absorption, absorption of water and minerals



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14. Fibrous roots are

A. primary

- B. developed from radical
- C. deeply seated
- D. neither primary nor arising from radical



- **15.** In most of the monocots primary roots
  - A. short lived
  - B. replaced by fibrous roots

C. surface feeder

D. all of these

#### **Answer:**



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16. Swollen root is broad at the base and tapers towards apex in... In which type it is swollen at middle and tapers in bot ends in .......The basal portion is swollen and taper

towards apex in beet is .....and in which root store food but do not have definite shape.

- A. fusiform, napiform, tuberous, conical
- B. conical, fusiform, napiform, tube
- C. napiform fusiform, tuberous, conical
- D. tuber, napiform, fusiform, conical

## **Answer:**



- 17. The penumatophores have numerous air spaces and small pores in periphery for exchange of gases are lenticels. Why pneumatophores are called as breathing roots
  - A. they fix nitrogen
  - B. exchange of gases to get oxygen for respiration
  - C. they helps in anaerobic respiration
  - D. they helps in additional absorption



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18. Pneumatophores grow at.....

A. marshy water logged area, grow vertically upward

B. desert

C. fresh water area

D. humid area



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- 19. Nodulated roots are present in... and for
  - A. non leguminous plants
  - B. cereals, nitrogen fixation
  - C. monocots, nitrogen fixation
  - D. leguminous plants, nitrogen fixation

**20.** In sweet potato tuberous roots are developed for... Fasciculated tuberous roots are developed for

A. nitrogen fixation

B. solublisation

C. storage, storage

D. breathing

**21.** Fasciculated tuberous, adventitious roots are common in

A. Dahilia

B. Asparagus

C. Sweet potato

D. both a and b



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**22.** In large trees like banyan some additional roots are developed for additional support are

A. stilt root

B. prop roots

C. climbing roots

D. fasciculated roots

#### **Answer:**



23. In large trees like banyan some additional roots are developed for additional support are prop roots, these are

- A. hygroscopic
- B. becomes red in moist condition
- C. without root caps, show secondary

growth

D. all of these

**24.** The Ficus benghalensis i.e.banyan tree about 200 years old in Indian botanical garden of Kolkata has

- A. 100 prop roots
- B. 1000 prop roots
- C. 1700 prop roots
- D. 1200 prop roots

# 25. Stilt roots are developed from

A. only basal node

B. few basal nodes

C. radical

D. leaf bases

#### **Answer:**



26. Stilt roots are...........

A. obliquely placed

B. give additional support & helps in absorption

C. developed from few basal nodes

D. all of these

#### **Answer:**



# 27. Stilt roots are common in

- A. jawar, maize
- B. screwpine (kewada), pandanus
- C. sugarcane, bajara
- D. all of these

#### **Answer:**



**28.** Climbing roots produce viscous substance for attachment are developed for support & Climbing roots are common in

- A. Money plant (Pothos)
- B. Kali mirch (Piper nigrum)
- C. Pan (Piper betel)
- D. all of these

## **Answer:**



**29.** Some roots perform the photosynthesis are called as

A. assimilatory roots

B. water absorbing roots

C. common in Tinospora, Podostemon,

Trapa

D. both a and c

#### **Answer:**



**30.** The orchid likeVanda and Dendrobium grows on branches of large trees and produces

- A. epipthytic roots for fixation
- B. clinging roots for absorption

fixation

- C. epiphytic roots for absorption and clinging for fixation
- D. both types of roots are developed for



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**31.** The parasitic, sucking or haustoria are present in

- A. orchid
- B. banyan
- C. piper betal
- D. cuscuta or Dodder



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## 32. Cuscuta are

- A. parasitic plants
- B. do not have chlorophylls
- C. stem produces wiry branches and develop parasitic root
- D. all of these



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**33.** In bryophyllum roots arises from leaf are called as...

- A. foliar
- B. epiphyllous roots
- C. foliar roots
- D. all of these



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**34.** Which of the following are correct about root?

- A. Roots are positively geotropic
- B. Roots are positively hydrotropic
- C. Roots are negatively phototrophic
- D. All of above



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35. In hydrophytes root cap is replaced by....

- A. Root bag
- B. Root tip
- C. Root pocket
- D. Root blade

**36.** Which of the following is the growing point of root?

A. Region of root cap

B. Region of cell division

C. Region of elogation

D. Region of absorption



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**37.** In which region of root cell undergo differentiation?

A. Region of maturation

B. Region of elongation

C. Region of division

D. All the above

**Answer:** 



**38.** Which of the following are correct about the functions of root?

A. Fixation of plant in soil

B. absorption of water, minerals

C. Conduction of absorbed material up to

base of stem

D. All the above

**Answer:** 



39. Which of the following is true?

A. tap root mainly grows downwards to depth

B. secondary and tertiary roots grow obliquely downwards or horizontally

C. all lateral branches are produced in acropetal manner

D. all of these



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**40.** The root system present in mango,mustard(Brassica),sunflower (

Helianthus) plant are......

- A. Adventitious
- B. Tap root
- C. Stilt root
- D. Epiphytic root



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- 41. The swelling of sweet potato is called as
  - A. aerial stem tuber
  - B. aerial tuber
  - C. underground stem tuber
  - D. underground root tuber for storage

**42.** Which of the following is true about epiphytic roots

A. velamen situated outside the cortex having porous wall for absorption of moisture

B. epiphytic roots are also called as assimilatory roots as they are greenish in colour

C. epiphytic roots are special,

aerial, hanging roots

D. all of these

# **Answer:**



**43.** Root is distinguishable from stem in

A. Having a root cap

B. Having root hairs

- C. Absence of nodes and internodes
- D. all of these



- **44.** A fibrous root system is better adapted than tap root system for
  - A. Storage of food
  - B. Anchorage of plant to soil

- C. Absorption of water and minerals
- D. Transport of water and organic food



- **45.** Which of the following is correct about stem?
  - A. Stem are positively phototropic
  - B. Stem are negatively geotropic

C. Stem are nagatively hydrotropic

D. all of these

### **Answer:**



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**46.** Which of the following is a compact young shoot consisting of condensed stem?

A. Bud

B. Flower

- C. Leaf
- D. Branches



- **47.** Which of the following pair is odd
  - A. negatively geotropic-shoot
  - B. negatively phototrophic-stilt root
  - C. positively hydrotropic-breathing roots

D. positively phototropic-prop-roots

### **Answer:**



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**48.** Which of the following is true

A. node is portion where dissimilar organs

like leaves, flowers & branches are

developed exogenously

B. internode is portion between two nodes

C. Stem is generally ascending part, youg stem is green perform photosynthesis

D. all of these

# **Answer:**



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**49.** Which of the following is true about underground stem?

A. stem remain dormant during

unfavorable condition

B. they gives of aerial shoots in favorable condition

C. underground stem perform functions

like storage of food, perennation, and

vegetative reproduction

D. all of these

# **Answer:**



**50.** Which of the following in not the character of stem?

A. presence of nodes

B. dissimilary organs

C. endogenous organs

D. development from plumule

### **Answer:**



# 51. Bulbil is a modification of

- A. Underground stem
- B. Bases of leaves
- C. Buds
- D. Radicle

### **Answer:**



**52.** All of the following give helps in storage except

A. stem tuber

B. corm

C. stipules

D. rhizome

### **Answer:**



53. Latera	branches	on shoot are
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- A. Endogenous
- B. epidermal origin
- C. Exogenously origin
- D. endodermal origin



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**54.** Bud is an

- A. immature flower
- B. condensed stem
- C. overlapping leaves
- D. condensed stem, overlapped by young,

immature leaves

# Answer:



**55.** The dorsoventral, underground, horizontal stem is called as rhizome it has...

A. nodes, internodes and scaly leaves

B. terminal and auxillary buds in the axil of each scaly leaf

C. useful for storage and vegetative reproduction

D. all of these

# **56.** Tubers differ from rhizome because

A. in tuber, tips of branches store the food while in rhizome, entire branch stores the food

B. tubers do not produce adventitious roots

C. rhyzome grows horizonatally below the soil

D. all of these

### **Answer:**



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# **57.** The rhizomes are common in

- A. Ginger
- B. Zingiber officinale
- C. banana
- D. all of these



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- 58. Ginger is a stem and not a root because
  - A. It is bitter in taste
  - B. It has nodes and internodes
  - C. It is non-green in color
  - D. It stores food

**59.** Which of the following is a modified green stem?

A. Rhizome

B. Bulbil

C. Cladode

D. Phylloclade



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**60.** Which of the following is false statement for Corm

A. Short, thick, unbranched, underground stem

B. function as storage of food

C. have buds on their nodes, helps in vegetative reproduction

D. they are common in turmeric, ginger



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**61.** Which of the following is wrong about corm

A. it is thick, fleshy upright underground stem

B. its dvelops buds in axil of scaly leaves which develops into daughter corms

C. it is condensed form of rhizome grows vertically

D. corm is subaerial modification of stem

# **Answer:**



**62.** Amorphophallus ( Zaminkand), Colocasia are an examples of

A. bulb

- B. corm
- C. tuber
- D. rhizome



- **63.** Which of the following is true about bulb?
  - A. A underground stem condensed, disc
    - like underground stem is called bulb

- B. upper surface shows many scaly leaves
- C. inner scaly leaves or leaf bases store food while outer thin dry leaves are protective
- D. all of these



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**64.** Which of the following is wrong?

- A. in bulb lower portion of disc like stem produces adventitious roots
- B. when fleshy scale leaves surround apical bud in the form of concentric rings called as tunicated bulb in onion
- C. when scale leaves partially overlap their margins only called as scaly bulb in onion
- D. in onion reserve food is stored in bulb while in garlic in adventitious roots



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**65.** The edible portion in a fresh onion comprises

- A. leaf bases
- B. buds and leaf bases
- C. Swollen stem
- D. Disc-like stem



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**66.** The potato and sweet potato shows similarity in

- A. both are underground
- B. vegetative reproduction
- C. both store food
- D. all of these



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# 67. In potato tuber have

A. possesses axillary buds(eyes)

B. store food

C. depressions which have buds

D. all of these

**68.** The edible part of potato and sweet potato is

A. root in both

B. fruit in both

C. stem, root

D. root, stem



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69. Rhizome differs from roots as it is

A. underground

B. used for storage

C. has scale, leaves and buds

D. used for fixation of plant

**Answer:** 



# 70. Runner in grasses

- A. sub aerial modification of stem
- B. aquatic modfication of stem
- C. underground modification of stem
- D. aerial modication of stem

### **Answer:**



### **71.** The runner shows

- A. creeping stem with long internodes and one or more nodes bearing leaves and axilliary buds, prostrate, hoziontal
- B. helps in vegetative reproduction
- C. storage
- D. both a and b

#### **Answer:**



### 72. Stolons are

A. lateral branches arises from lower part of stem

B. give additional support

C. its terminal bud give rise to new plant so

helps in vegetative reproduction

D. all of these

**Answer:** 

### 73. Stolons are common in

- A. Will strawberry
- B. Jasmine
- C. Mentha, Colocasia
- D. all of these

### **Answer:**



**74.** Runner of aquatic plant is called offset is common in hydrophytes

A. Water hyacinth or jalkubhi Eichhornia

B. Pistia

C. for vegetative reproduction

D. all of these

#### **Answer:**



# 75. Suckers are developed from

A. horizontal or vertical branch of main stem

B. Underground rhizome

C. buds of leaves

D. tuber

### **Answer:**



### 76. Sucker are

- A. move horizontally in soil
- B. adventitious roots develops from lower sides of node
- C. they are called as underground runner, common in Mint, Chrysanthemum
- D. all of these

### **Answer:**



77. Sucker is called underground runner as it

A. develops from the axils of scale

B. grows horizontally below the soil for some distance

C. Produces green leaves to form aerial shoots

D. all of these

**Answer:** 

**78.** A shorter and thicker sub aerial weak stem bearing a cluster of leaves and giving out adventitious roots from all nodes in Eichhornia is...

- A. Stolon
- B. Runner
- C. Sucker
- D. Offset



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# 79. Corm differs from rhizome in having

A. corm is horizontal, rhizome upright

B. corm upright, rhizome horizontal

C. both are horizontal

D. both are upright

#### Answer:

**80.** In plant like Amorphophallous, Colchicum which stem modification is present

A. corm

B. tuber

C. bulb

D. bulbil

**Answer:** 



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**81.** Which of the following is true?

A. in xerophytes leaves are modified into spines to reduce size to check transpiration

B. in opuntia stem becomes fleshy thick and modified for photosynthesis

C. in opuntia modified stem takes over the function of leaf

D. all of these

### **Answer:**



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**82.** Which of the following is wrong about cladode?

A. these are green branches of limited growth usually one internode long

- B. stem perfome the process of photosynthesis
- C. true leaves are reduced scales
- D. it is common in euphorbia



- 83. Find out the wrongly matched pair.
  - A. Offset-Pistia

- B. Stolon-Termuric
- C. Tuber-Potato
- D. Bulb-Allium



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**84.** In Dioscorea, Agave vegetative reproduction is brought about by

A. stolon

- B. runner
- C. bulbil
- D. sucker



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**85.** All of the following are true except.

A. stem tendril is stem modification in which axillary bud mdified to tendril

B. tendrils are leafless coiled structures

with sensitive adhesive glands

C. it help to support & climb the plant

D. it is subaerial modification of stem

### **Answer:**



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**86.** Phylloclade is thick,fleshy,succulent contain mucilage to retain water and the modification of.........

- A. root
- B. stem of several internodes
- C. leaf
- D. flower



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**87.** In Opuntia Which is one of the following is a xerophytic plant in which the stem becomes

thick fleshy, green photosynthetic and spines are produced on

- A. on internodes
- B. on spiny leaves
- C. fleshy leaves
- D. Entire aerial part of plant

### **Answer:**



**88.** Phylloclade is cylindrical in..... and ribbon shaped in......

A. Opuntia, Muehlenbeckia

B. Casuarina, Euphorbia tirucalli &

Muehlenobeckia

C. Muehlenbeckia, Causuarina

D. Asparagus, Casuarina

### **Answer:**



**89.** The roots that originate from the base of the stem are

- A. Prop roots
- **B.** Lateral roots
- C. Fibrous roots
- D. Primary roots

#### **Answer:**



- 90. Identify the incorrect statement.
  - A. Sapwood is the innermost secondary xylem and is lighter in colour
  - B. Due to deposition of tannins, resins, oils etc., heart wood is dark in colour.
  - C. Heart wood does not conduct water but gives mechanical support.
  - D. Sapwood is involved in conduction of water and minerals from root to leaf.



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# 91. Ray florets have

A. Hypogynous ovary

B. Half inferior ovary

C. Inferior ovary

D. Superior ovary

#### **Answer:**

92. The ovary is half inferior in

A. Sunflower

B. Plum

C. Brinjal

D. Mustard

**Answer:** 



93. The transverse section of a plant shows following anatomical features :(i) Large number of scattered vascular bundles surrounded by bundle sheath. (ii) Large conspicuous parenchymatous ground tissue. (iii) Vascular bundles conjoint and closed.

- A. Disctylednous stem
- B. Dicotyledonous root
- C. Monocotyledonous stem
- D. Monocotyledonous root

