

# 1) Underline the correct answer:

Root

1- The word adventitious refers to

- a- structures arising at usual places
- b- structures arising at unusual places
- c- structures arising at roots only
- d- structures arising at stems only

2- Tap root develops from

- a- micropyle
- b- radicle
- c- plumule
- d- bud

3- The function of root cap is

- a- absorption
- b- division
- c- protection
- c- elongation

4. Pneumatophores are

- a- modified stems
- b- modified leaves
- c- outgrowth from the epidermis
- d- modified roots

5. Plants with parasitic roots have

- a- special "spongy" tissue
- b- root nodules
- c- an epidermis several cells thick
- d- no chlorophyll

- 6. Velvane roots aid in**
- a- preventing loss of moisture
  - b- photosynthesis
  - c- supporting plants
  - d- Food storage

**7. First organ appears during germination**

- a) plumule
- b) radical
- c) embryo
- d) cotyledons

**8. Most dicot plants have**

- a) aerial root
- b) fibrous root
- c) adventitious root
- d) tap root

**9. Root cap contains**

- a) chloroplasts
- b) amyloplasts
- c) chromoplasts
- d) oligoplasts

**10. propagative roots contains**

- a) terminal buds
- b) adventitious buds
- c) apical buds
- d) lateral buds

**11. Suckers are**

- a) buds develop into aerial stem
- b) stems develop into aerial buds
- c) stems develop into aerial flowers
- d) buds develop into underground stems

**12. Root nodules contain**

- a) nitrogen-fixing bacteria
- b) hydrogen fixing bacteria
- c) protein fixing bacteria
- d) Phosphorus fixing bacteria

Stem

**13. Horizontal stems that grow above ground.**

- a- Rhizomes
- b- Stolons
- c- Tubers
- d- Corms

**14. Single flower with several to many pistils gives**

- a- Simple fruits
- b- Grain
- c- Multiple fruits
- d- Aggregate fruits

**15. Cladophylls aid in**

- a- preventing loss of moisture
- b- photosynthesis
- c- supporting plants
- d- respiration

**16. Flattened and very leaflike stems**

- a- Rambles
- b- Tendrils
- c- Cladophylls
- d- Prickles

**17. Thorns are**

- a- modified stems
- b- modified leaves
- c- outgrowth from the epidermis
- d- modified roots

**18. Structures found in stem only**

- a) blade and petiole
- b) lamina and vines
- c) stipules and leaves
- d) nodes and internodes

**19. The bud found in the angle between leaf and stem called**

- a) terminal bud
- b) axillary bud
- c) naked bud
- d) covered bud

**20. Terminal bud usually**

- a) form separate branch
- b) extend twig length
- c) tend to tendirl
- d) form a leaf

21.All these are stems except

- a) tubers
- b) corms
- c) rhizoms
- d) velamen

Leaf

22.Leaves have all the leaflets attached at the same point.

- a- Pinnately compound leaves
- b- Bipinnately compound leaves

- c- Palmately compound leaves
- d- Simple leaves

23.Succulent leaves modified for

- a- reproduction
- b- water storage
- c- make up the absence of petals
- d- food storage

24.When leaflets appears in pairs along a central stalklike rachis

- a- Pinnately compound leaves
- b- Bipinnately compound leaves
- c- Palmately compound leaves
- d- Simple leaves

25.Sessile leaf is a leaf without

- a) stipules
- b) vines
- c) bud
- d)petiols

26.bractes are

a) reproductive leaves

b) floral leaves

c) storage roots

d) reproductive roots

**Flower**

**27. Stamens consists of**

a) style and stigma

b) filament and anther

c) ovary and ovule

d) sepals and petals

**Fruit**

**28. Dry fruits with pericarp extending out in the form of a wing**

a- Achene

b- Grain

c- Samara

d- Schizocarp

**29. Simple fleshy fruit with a single seed**

a- Hesperidium

b- Pepo

c- Drupe

d- berry

**30. Dry fruit split along two sides and seeds are born on a central partition.**

a- Siliques

b- Capsules

c- Nuts

d- Legumes

**31. Fruits usually develop from**

a- ovule

b- ovary

c- receptacle

d- embryo

**32. Fruit pericarp consists of**

- a) Endocarp + Mesocarp + Exocarp
- b) Endocarp + Mesocarp
- c) Mesocarp + Exocarp
- d) Endocarp + Exocarp

**33. A berry fruit with a leathery skin containing oils called**

- a) pome
- b) drupe
- c) pepo
- d) hesperidium

**34. Fruit derived from a single flower with several to many pistils**

- a) aggregate fruit
- b) simple fruit
- c) multiple fruit
- d) compound fruit

**35. Most common dry fruit that split and consist of at least two carpels and split in many ways.**

- a) capsules
- b) achene
- c) nut
- d) grain

Seed

**36. Seeds usually develop from**

- a- stamen
- b- ovary
- c- receptacle
- d- embryo

**37. The term pollination means**

- a- The union of an egg and sperm
- b- The transfer of pollen grains from an anther to stigma
- c- The union of polar nuclei and sperm
- d- The germination of pollen grains

**38. The part above the point of attachment of the cotyledons is**

- a- the plumule
- b- the epicotyl

**c- the hypocotyl**

**d- the internode**

**39. When seeds dormancy can be broken by placing seeds in a refrigerator in damp sand for few weeks, this is called**

**a- stratification**

**b- scrafication**

**c- after ripening**

**d- apomixis**

**40. The integuments becomes**

**a) seed coat**

**b) fruit**

**c) embryo**

**d) cotyledons**

#### Taxonomy

**41. Chlorella is tiny unicellular algae that**

**a- use as important food and oxygen source.**

**b- produce algin.**

**c- make up diatomaceous earth on ocean floor**

**d- produce agar.**

**42. Eukaryotic cells**

**a- have membrane - bound organelles**

**b- have 70s ribosomes**

**c- lack a nuclear envelope**

**d- Lack membrane-bound organelles.**

**43. Algae have a glassy shell that consist of two halves**

**a- Euglena**

**b- Diatoms**

**c- Chlorella**

**d- Spirogyra**

**44. Flower plants complete their life cycle in a single season**

**a- Annuals**

**b- Biennials**

**c- Perennials**

**d- Monoecious**

**45. Algae used as a source of agar, and also for human food**

**a- Red algae**

**b- Spirogyra**

c- Brown algae

d- Chlorella

46. Algae produce algin, an important agent in hundreds of food products.

a- Red algae

b- Spirogyra

c- Brown algae

d- Chlorella

### **Compare between the following terms:**

- 1- Exocarp and pericarp
- 2- Monoecious and dioecious
- 3- Spines and prickles
- 4- Superior and inferior ovary
- 5- Division of Chlamydomonas and Diatoms

### **Define the following terms**

- 1- Contractile root
- 2- Hesperidium
- 3- Parthenocarpy
- 4- Double fertilization
- 5- Adventitious.
- 6- Pollination
- 7- Fertilization
- 8- Monoecious
- 9- dioecious
- 10- scarification
- 11- deciduous tree
- 12- evergreen tree
- 13- phyllotaxy
- 14- venation
- 15- bracts

- 16- annuals
- 17- biennials
- 18- perennials
- 19- Pnematophores
- 20- *Sucker*

**Matching: Write in meddle column the number for the best answer.**

A	B
<b>1- Rhizomes</b>	The arrangement of leaves around the stem
<b>2- Bracts</b>	Plants complete their life cycle in a single season
<b>3- Pome</b>	The union of an egg and sperm
<b>4- Spines</b>	Consists of ovary, style and stigma
<b>5- Exocarp</b>	The inner boundary around the seed
<b>6- Phyllotaxy</b>	Are modified stems
<b>7- Stratification</b>	have membrane - bound organelles
<b>8- Scarification</b>	Seeds develop without fusion of gametes
<b>9- Annuals</b>	Algae can change its shape
<b>10- Legumes</b>	Consists of filament and anther
<b>11- Fertilization</b>	Simple fleshy fruit which its receptacle grows up around the ovary.
<b>12- Prickles</b>	Breaking seeds dormancy by placing seeds in a refrigerator in damp sand for few weeks
<b>13- Parthenocarpy</b>	Are floral leaves
<b>14- Stamens</b>	Breaking seed dormancy by nicking or cracking the seeds
<b>15- Pistils</b>	Dry fruit split along two sides
<b>16- Eukaryotic cells</b>	Are modified leaves
<b>17- Euglena</b>	Outgrowths from the epidermis or cortex

**Put the suitable sign ✓ or ✗**

1. The main root functions are anchorage and absorption of water and minerals.
2. Most dicot plants have fibrous root systems.
3. The regions of root are called: root cap, region of cell division, region of elongation, and region of maturation.
4. The root cap contains particles called chromoplasts.
5. Velvane are modified stems.
6. Terminal bud may become branch or flower.
7. Tubers have adventitious roots.
8. Tendrils may refer to specialized stem or modified leaf.
9. Leaves of deciduous trees normally live for more than two to seven years.
10. Plants may take many years to produce seeds called perennials.
11. Corolla of the flower consists of sepals.
12. The ovary of the flower pistil develops later into a seed.
13. Pepo is a berry fruit with a leathery skin containing oils.
14. Aggregate fruit is derived from a single flower with many pistils.
15. Silique is a dry fruit split along two sides and the seeds are borne on a central partition.
16. Plumule is the tip that will develop into a root.
17. All plant seeds germinate at 30°C.
18. Prokaryotic cells have sexual reproduction by fusion of gametes.
19. Division Chlorophyta includes the Green algae.
20. Algae are not important in aquatic food chains.
21. Diatom shells make up diatomaceous earth which used for filtering, polishes, insulation and reflectorized paint.
22. Algin is used as stabilizer and thickening agent in hundreds of food products, paints, medicines, papers, ceramic and others.
23. Brown algae are a source of fertilizer and iodine and some serve as food for both of livestock and humans.
24. Red algae are a source of agar, which is used as cultural medium for bacteria and other organisms or tissues; some are also used for human food.
25. Gymnosperm is two Greek words means covered seed.