



# BIOLOGY

## NEET & AIIMS

### PLANT KINGDOM

#### Example

1. Name the different types of present in brown algae.



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2. What is the function of frond in brown algae ?

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3. What are the constituents of cell wall in green algae ?

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4. Why are bryophytes called the amphibians of the plant kingdom?

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5. Why in bryophytes the sporophyte remains attached to the gametophyte ?



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6. What are sporophylls ?



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7. Why selaginella is known as heterosporous ?



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8. Why conifers have thick cuticle and sunken stomata ?



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9. Name one drug obtained from gymnosperm. Give its one use.



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10. What is pollination ?



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11. What is the function of endosperm ?



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## Test Yourself

1. An algae which is used as food supplements even by space travellers is

A. spirpgyra

B. Dictyota

C. Spirullina

D. Gracilaria

**Answer: C**



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2. In red algar, food is stored in the form of

A. Floriden starch

B. Mannitol

C. Glycogen and leucosin

D. Laminarin

**Answer: A**



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3. Agra is obtained from

- A. Polysiphonia and Porphyra
- B. Chlamydomonas and Spirogyra
- C. Gelidium and Gracilaria
- D. Chara and Chlamydomonas

**Answer: C**



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4. Which of the following is a brown algae ?

A. Sargassum

B. Volvox

C. Ulothrix

D. Chara

**Answer: A**



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5. Red algae are named so because of the predominance of



- A. Xanthophyll
- B. r-phycoerythrin
- C. Carotene
- D. Chlorophyll a & b

**Answer: B**



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**6. The cell wall of brown algae is made up of**

- A. Cellulose and chitin
- B. Cellulose and peptidoglycan

C. Cellulose and algin

D. Cellulose and starch

**Answer: C**



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7. The male sex organ that produces antherozoids is known as

A. Gametophyte

B. Antheridium

C. Sporophyte

D. Archegonium

**Answer: B**



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8. Brophyte which provides peat is

A. Sphagnum

B. Marchantia

C. Funaria

D. Polytrichum

**Answer: A**



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9. The first organisms to colonise rocks are

- A. Mosses and fungi
- B. Funaria and mosses
- C. Lichens and mosses
- D. Marchantia and Sphagnum

**Answer: C**



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10. Which of the following statement is incorrect regarding bryophytes ?

A. The female sex organ is flask shaped

B. The antherozoids are released into water

C. The antherozoids are biflagellated

D. Zygote formed undergoes meiosis immediately

**Answer: D**



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11. A plant that possess vascular tissues is

- A. Funaria
- B. Equisetum
- C. Polytrichum
- D. Sphagnum

**Answer: B**



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12. The main plant body is differentiated into true root, stem and leaves in

A. Selaginella

B. Marchantia

C. Porphyra

D. Chara

**Answer: A**



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**13. Antherozoids represents**

A. Male gametophyte

B. Photosynthetic prothallus

C. Motile male gametes produced in antheridia

D. Well differentiated sporophyte

**Answer: C**



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**14.** After germination the megaspore give rise to

A. Female gametophyte

B. Antheridia

C. Male gametophyte

D. Antherozoid



**Answer: A**



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**15. One of the tallest species is**

- A. Pinus
- B. Sequoia
- C. Cycas
- D. Cedrus

**Answer: B**



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16. In gymnosperms pollination generally occurs by

A. Air currents

B. Water

C. Insects

D. Both (2) & (3)

**Answer: A**



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17. The ploidy of a gamete present in the pollen grain is

A. Polyploid

B. Haploid

C. Triploid

D. Diploid

**Answer: B**



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18. In gymnosperms, the pollen tube discharge the male gametes

- A. In the ovary
- B. In the microsporangia
- C. Near the mouth of the archegonia
- D. Both (2) & (3)

**Answer: C**



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19. Polar nuclei fuse to produce

A. Diploid secondary nucleus

B. Zygote

C. Antipodals

D. Synergids

**Answer: A**



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**20.** After fertilisation the antipodal cells

A. Develop into nucellus

B. Provide nutrition to the developing gamete

C. Degenerate

D. Undergo meiosis

**Answer: C**



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**21.** In which of the following double fertilisation occurs ?

A. Bryophytes

B. Angiosperms

C. Pteridophytes

D. Gymnosperms

**Answer: B**



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22. In angiosperms pollen germinate on the

A. Stigma

B. Style

C. Anther

D. Ovule

**Answer: A**



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## Exercise

1. The artificial system of classification is based on
- A. One or few anatomical features
  - B. One or few morphological features
  - C. Many morphological features
  - D. Many internal features

**Answer: B**



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2. Classification system given by Linnaeus was based on

- A. Androecium structure
- B. Flower arrangement
- C. Leaf morphology
- D. Plant habit

**Answer: A**



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3. Natural classification system proponents are

A. Bentham and Hooker

B. Hutchinson and Takhtajan

C. Linnaeus and Aristotle

D. Both (1) & (2)

**Answer: A**



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4. (A) Number and codes are assigned to few of the selected characters in numerical taxonomy.

(B) Phylogenetic classification system are based on evolutionary relationships between the various organisms.

(C ) Cytotaxonomy is based on cytological information like chromosome number, structure & behaviour.

A. A and B are incorrect

B. Only C is correct

C. Only A is incorrect

D. B and C are incorrect

**Answer: C**



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5. Each character is given equal importance and at the same time hundreds of characters can be considered in

- A. Cladistics
- B. Phenetics
- C. Chemotaxonomy
- D. Cytotaxonomy

**Answer: B**



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6. Which of the following is a colonial algae ?

A. Chlamydomonas

B. Ulothrix

C. Volvox

D. Spirogyra

**Answer: C**



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7. Anteriorly placed, equal, 2-8, flagella are characteristic to

A. Blue green algae

B. Green algae

C. Brown algae

D. Red algae

**Answer: B**



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**8. Which set of characters is specific to red algae ?**

A. Phycobilins, chlorophyll a and c

B. Chlorophyll a and d, Floriden starch

C. Flagella absent, Mannitol

D. Fucoxanthin, Floridean starch

**Answer: B**



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9. Plant body is differentiated in hold fast, stipe and frond in

A. Ulva

B. Laminaria

C. Oedogonium

D. Acetabularia

**Answer: B**



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**10.** Motile, asexual and endogenous spores produced in algal members are called

A. Zoospores

B. Aplanospores

C. Conidia

D. Cyst



**Answer: A**



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11. Brophytes are also called \_\_\_\_\_ of plant kingdom.

A. Fishes

B. Amphibians

C. Reptiles

D. Aves

**Answer: B**

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12. Bryophytes are

- A. Always homosporous
- B. Always heterosporous
- C. Sometimes heterosporous
- D. Seldom homosporous

**Answer: A**

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13. Male gametes of bryophytes are :-

A. Multiflagellated

B. Uniflagellated

C. Non-motile

D. Biflagellated

**Answer: D**



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14. Plant body of liverworts is

- A. Thalloid in Porella
- B. Thalloid in Marchantia
- C. Leafy in Marchantia
- D. More than one option is correct

**Answer: B**



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**15. Gemmae are**

- A. Unicelled structures
- B. Multicelled asexual buds

C. Diploid sporophytic structures

D. Haploid sexual structures

**Answer: B**



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**16.** Ecologically the most important moss is

A. Sphagnum

B. Funaria

C. Polytrichum

D. Pogonatum

**Answer: A**



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**17.** Select incorrect statement w.r.t characters of true moss

- A. Multicelled branched rhizoids
- B. Presence of scales
- C. Presence of protonema
- D. Erect leafy axis as mature gametophyte

**Answer: B**

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18. All given members are monoecious, except

A. Marchantia

B. Funaria

C. Anthoceros

D. Sphagnum

**Answer: A**

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19. Find odd w.r.t. ploidy level in bryophytes

A. NCC

B. VCC

C. Spore

D. Foot

**Answer: D**



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20. Sporophyte of mosses is \_\_\_\_\_ than liverworts.



- A. Least differentiated
- B. Equally differentiated
- C. More differentiated
- D. Undifferentiated

**Answer: C**

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**21. Pteridophytes are also called**

- A. Vascular amphibians of plant kingdom
- B. First tracheophytes

C. Botanical snakes

D. All of these

**Answer: D**



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**22.** A. Companion cells and sieve tubes are absent in pteridophytes.

B. Gametophyte of pteridophytes require cool, dry and shady places to grow.

C. Prothallus is found in Dryopteris.

A. Only C is correct

B. Only A is incorrect

C. A and B are correct

D. Only B is incorrect

**Answer: D**



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**23. Strobilus found in**

A. Equisetum

B. Adiantum

C. Marsilea

D. Rhynia

**Answer: A**



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**24.** Spread of living pteridophytes is restricted to narrow geographical regions due to need for

A. Water

B. Food

C. Chemicals

D. More than one option is correct

**Answer: A**



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**25. True ferns are associated with**

A. Macrophylls

B. Microphylls

C. Strobilus

D. Thalloid sporophyte

**Answer: A**



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26. Select a set of heterosporous genera.

A. Marsilea, Azolla

B. Salvinia, Pteridium

C. Adiantum, Azolla

D. Pteris, Lycopodium

**Answer: A**



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27. Select the correct match :

- A. Psilopsida - Dryopteris
- B. Lycopsida - Selaginella
- C. Sphenopsida - Pteris
- D. Pteropsida - Equisetum

**Answer: B**



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**28.** Find the correct option w.r.t. pteropsida

- A. Selaginella
- B. Equisetum

C. Dryopteris

D. Lycopodium

**Answer: C**



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**29.** Dryopteris is/has

A. Gametophyte as main plant body

B. Homosporous

C. Non-motile male gametes

D. Shows seed habit



**Answer: B**



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30. \_\_\_\_\_ is used as biofertiliser :

A. Azolla

B. Marsilea

C. Equisetum

D. Salvinia

**Answer: A**



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31. The tallest gymnospermic plant is

- A. Pinus
- B. Sequoia
- C. Cycas
- D. Cedrus

**Answer: B**



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32. The endosperm in gymnosperms is

A.  $n$

B.  $2n$

C.  $3n$

D.  $4n$

**Answer: A**



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**33.** The pollen grain is

A. Highly reduced male gametophyte

B. Well developed male gametophyte

C. Highly reduced sporophyte

D. Well developed female gametophyte

**Answer: A**



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**34. A. Siphonogamy is found in Pinus**

B. Stem branches are monomorphic in Pinus

A. A and B are incorrect

B. Only A is correct

C. Only B is correct

D. A and B are correct

**Answer: B**



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**35.** In gymnosperms pollination is exclusively by

A. Water

B. Insects

C. Air

D. Animals

**Answer: C**



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36. After fertilisation ovules turn into

- A. Fruit
- B. Seed
- C. Cone
- D. Embryo

**Answer: B**



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**37.** The archegoniate spermatophytes are

A. Angiosperms

B. Bryophytes

C. Pteridophytes

D. Gymnosperms

**Answer: D**



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**38.** Select a correct match

A. Chilgoza - Pinus gerardiana

B. Canada balsum - Ephedra

C. Cedra wood oil - Cedrus

D. Taxol - Ginkgo

**Answer: A**



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**39.** Cyanobacteria is found in association with

A. coralloid roots of Pinus

B. Mycorrhizal roots of Pinus



C. Coralloid roots of Cycas

D. Mycorrhizal roots of Cycas

**Answer: C**



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**40.** Needle leaf of conifers is a

A. Xerophytic adaptation

B. Mesophytic adaptation

C. Hydrophytic adaptation

D. Halophytic adaptation

**Answer: A**



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**41.** Independent free living photosynthetic gametophyte is not found in life cycle of

A. Funaria

B. Marchantia

C. Eucalyptus

D. Riccia

**Answer: C**

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42. Female gametophyte in angiosperms is called

A. Endosperm

B. Carpel

C. Ovule

D. Embryo sac

**Answer: D**

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**43.** Find odd one w.r.t. haplontic life cycle

A. Ectocarpus

B. Ulothrix

C. Spirogyra

D. Chlamydomonas

**Answer: A**



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**44.** Select correct w.r.t. diplohaplontic life cycle

A. Found in Polysiphonia and Gnetum

B. Both gametophyte and sporophyte phases are present

C. Common in green algae

D. Gametic meiosis occurs

**Answer: B**



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**45.** The phanerogams with ovary are

A. Angiosperms

B. Gymnosperms

C. Bryophytes

D. Pteridophytes

**Answer: A**



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**46.** All plants have two cotyledons in their seed, except

A. Pea

B. Eucalyptus

C. Sunflower

D. Orchids

**Answer: D**



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**47.** Terminal receptive part of pistil which act a a landing platform for pollen is

A. Style

B. Ovary

C. Ovule

D. Stigma

**Answer: D**



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**48.** Fusion of male gamete with diploid secondary nucleus produces \_\_\_\_\_ and it known as \_\_\_\_\_ (respectively).

A. PEN , Triple fuslon

B. PEN , Syngamy

C. Zygote , Syngamy



D. Zygote , Triple fusion

**Answer: A**



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**49.** A typical embryo sac is

- A. 8-nucleated and 7-celled
- B. 7-nucleated and 7-celled
- C. 8-nucleated and 8-celled
- D. 7-nucleated and 8-celled

**Answer: A**



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50. Timber is obtained from

A. Coriander

B. Mustard

C. Teak

D. Cotton

**Answer: C**



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## Assignment Section A Objective Type Questions

1. Which of the following systems of classification involves usage of one or few morphological characters for grouping of organisms ?

- A. Artificial system
- B. Natural system
- C. Phylogenetic system
- D. Bentham and Hooker's system

**Answer: A**



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2. Classification of organisms on the basis of fossils record that play important role in elucidation of evolutionary relationships is

- A. Earliest systems
- B. Phylogenetic systems
- C. Morphotaxonomy
- D. Artificial system

**Answer: B**



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3. DNA sequence is the basis of grouping organisms  
in

A. Karyotaxonomy

B. Cytotaxonomy

C. Phenetics

D. Chemotaxonomy

**Answer: D**



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4. Plants which are not differentiated into roots, stems and leaves are

A. Algae

B. Gymnosperms

C. Pteridophytes

D. Angiosperms

**Answer: A**



**Watch Video Solution**

5. Cell wall of Spirogyra is composed of

A. Peptidoglycan

B. Pectin

C. Cellulose

D. Both (2) & (3)

**Answer: D**



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**6. Kelps are massive**

A. Brown algae

B. Amphibious plants

C. Flowering plants

D. Plants with naked seeds

**Answer: A**



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7. Laminarin is the stored food in

A. Dictyota

B. Volvox

C. Polysiphonia

D. Chlamydomonas



**Answer: A**



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**8. In Gracilaria, sexual reproduction is**

- A. Isogamous
- B. Anisogamous
- C. Oogamous
- D. Both (1) & (2)

**Answer: C**



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9. Ectocarpus is

- A. Unicellular green algae
- B. Filamentous brown algae
- C. Branched red algae
- D. Colonial green algae

**Answer: B**



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10. Find out the mismatch pair

A. Carrageen - Red algae

B. Algin - Brown algae

C. Agar - Chlorella

D. Single celled protein - Spirullina

**Answer: C**



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**11.** In algae, the photosynthetic pigments are present in

A. Pyrenoids

B. Cell wall

C. Chloroplast

D. Vacuole

**Answer: C**



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**12.** Which of the following statement is incorrect regarding bryophytes ?

A. They are dependent on water for sexual reproduction

B. The main plant body is diploid

C. They usually occur in damp, humid and shaded localities

D. They play an important role in plant succession on bare rocks

**Answer: B**



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**13.** Peat is obtained from

A. Sphagnum

B. Funaria

C. Riccia

D. Marchantia

**Answer: A**



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**14. Liverworts reproduce asexually by**

A. Gemmae

B. Fragmentation

C. Mitospores

D. Both (1) & (2)

**Answer: D**



**Watch Video Solution**

15. \_\_\_\_\_ is used by gardeners to keep cut plants moist during transportation and propagation

A. Marchantia

B. Sphagnum

C. Equisetum

D. Funaria

**Answer: B**



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**16.** In mosses the sex organs are present in the

- A. Protonema stage
- B. Sporophytic stage
- C. Leafy stage
- D. Both (1) & (2)

**Answer: C**



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17. Antherozoids represents

- A. Male gametophyte
- B. Photosynthetic sporophyte
- C. Female gametophyte
- D. Motile male gametes

**Answer: D**



**Watch Video Solution**

18. In pteridophytes, spores germinate to give rise to

- A. Prothallus
- B. Protonema
- C. Leafy stage
- D. Strobili

**Answer: A**



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**19.** In *Selaginella* the embryo develops into

- A. Gametophyte
- B. Sporophyte

C. Archegonium

D. Antheridium

**Answer: B**



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**20.** In pteridophytes, the megaspore germinates to form

A. Pollen grain

B. Embryo

C. Seed

D. Female gametophyte

**Answer: D**



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21. The development of young embryos of pteridophytes within the female gametophytes is a precursor to the

A. Aquatic habit

B. Autotrophic habit

C. Seed habit

D. Parasitic habit

**Answer: C**



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**22.** Which of the following possess vascular tissues but lacks seeds ?

A. Mosses

B. Volvox

C. Ferns

D. Liverworts

**Answer: C**



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**23.** The main plant body is differentiated into true root, stem and leaves in

- A. Green algae
- B. Bryophytes
- C. Blue green algae
- D. Pteridophytes

**Answer: D**



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24. Evolutionarily the first terrestrial plants to possess vascular tissues are

- A. Green algae
- B. Pteridophytes
- C. Brown algae
- D. Bryophytes

**Answer: B**



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25. In pteridophytes, fusion of gametes takes place in

- A. External medium
- B. Antheridium
- C. Sporangium
- D. Archegonium

**Answer: D**



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26. The first seeded plants are the



A. Bryophytes

B. Gymnosperms

C. Algae

D. Pteridophytes

**Answer: B**



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**27. Gymnosperms have**

A. Tap root system

B. Seeds enclosed within the fruit

C. Rhizoids

D. Branched stems always

**Answer: A**



**Watch Video Solution**

**28.** Which of the following has both the male and female cones on same plant body ?

A. Cycas

B. Ginkgo

C. Eucalyptus

D. Pinus

**Answer: C**



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**29.** Which of the following plants possess naked seeds ?

A. Bryophytes

B. Gymnosperms

C. Pteridophytes

D. Angiosperms

**Answer: B**



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**30.** The megaspore mother cell is differentiated from one of the cells of the

- A. Nucellus
- B. Pollen grain
- C. Microporangia
- D. Both (2) & (3)

**Answer: A**

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31. Coralloid roots have a symbiotic association with

- A. Photosynthetic green algae
- B.  $N_2$  - fixing cyanobacteria
- C. Fungus
- D. Photosynthetic brown algae

**Answer: B**

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**32.** The cones bearing microsporophylls are known as

- A. Male strobili
- B. Macrosporangiate
- C. Female strobili
- D. Both (2) & (3)

**Answer: A**



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**33.** Pollen grains are released from

A. Macrosporangium

B. Microsporangium

C. Megaspore mother cell

D. Archegonium

**Answer: B**



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**34.** In angiosperms the sporophylls are organised into

A. Seeds

B. Fruits

C. Flowers

D. Seed coats

**Answer: C**



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**35.** Which of the following angiosperm is almost microscopic ?

A. Eucalyptus

B. Wolffia



C. Acacia

D. Colocasia

**Answer: B**



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**36.** Endosperm of angiosperm is

A. Triploid

B. Diploid

C. Haploid

D. Tetraploid

**Answer: A**



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**37.** Fusion a male gamete with the secondary nucleus forms the

A. Zygote

B. Embryo

C. Seed

D. Endosperm

**Answer: D**



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**38.** In angiosperms the female gametophyte is also known as

A. Nucellus

B. Embryo sac

C. Endosperm

D. Stigma

**Answer: B**



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39. An event unique to angiosperms is

- A. Double fertilisation
- B. Sexual reproduction
- C. Pollination
- D. Spore formation

**Answer: A**



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40. \_\_\_\_\_ functions as landing platform for the pollen grains in flowering plants.

A. Style

B. Stigma

C. Ovary

D. Ovules

**Answer: B**



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**41.** Which of the following cells of embryo sac degenerate after fertilisation in angiosperms ?

A. Synergids

B. Polar nuclei

C. Antipodal cells

D. Both (1) & (3)

**Answer: D**



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**42.** In angiosperms, functional megaspore develops into

A. Pollen grain

B. Embryo sac

C. Stigma

D. Ovary

**Answer: B**



**Watch Video Solution**

**43.** The germination of pollen grain results in the formation of

A. Primary endosperm nucleus

B. Embryo

C. Pollen tube

D. Polar nuclei

**Answer: C**



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**44.** Eucalyptus is different from Cedrus in the presence of

A. Syngamy

B. Seeds

C. Archegonia

D. Triple fusion



**Answer: D**



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**45. Cotyledons are**

- A. Modified roots
- B. Embryonic leaves
- C. Known as primary endosperm nucleus
- D. Present in gymnospermic seeds only

**Answer: B**



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**46.** Which of the following is not a dicot ?

A. Eucalyptus

B. Sunflower

C. Acacia

D. Banana

**Answer: D**



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47. The diploid sporophyte is dominant in life cycle of

A. Volvox

B. Spirogyra

C. Chlamydomonas

D. Eucalyptus

**Answer: D**



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48. Haplo - diplontic condition is exhibited by

A. Most algae

B. Bryophytes

C. Angiosperms

D. Gymnosperms

**Answer: B**



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**49.** Haplontic life cycle is represented by

A. Volvox

B. Cycas

C. Selaginella

D. Salvinia

**Answer: A**



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50. Comparable to angiosperms, which of the following algae exhibits diplontic life cycle ?

A. Spirogyra

B. Fucus

C. Polysiphonia

D. Ulothrix

**Answer: B**



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## Assignment Section B Objective Type Questions

1. The sexual system of classification is

A. Artificial system

B. Based on stamens characters

C. Based on corolla and carpels characters

D. Both (1) & (2)

**Answer: D**



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2. Bentham and Hooker's classification is

- A. Classification of taxa based on actual examination
- B. Artificial system of classification
- C. Phylogenetic system of classification
- D. Based on Evolution

**Answer: A**



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**3. The thallus organization of Volvox is**

- A. Multicellular and coccoid
- B. Colonial and nonflagellate
- C. Unicellular
- D. Colonial and motile

**Answer: D**



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4. Brown algae are quite common in

A. Fresh water habitats

B. Tropical sea water

C. Temperate sea water

D. Both (2) & (3)

**Answer: C**



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5. Algae with floridean starch as reserve food material are also characterized by

- A. Presence of chlorophyll b
- B. Stacked thylakoids
- C. Nonsulphated phycocolloids
- D. Nonflagellate nature

**Answer: D**



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6. Hundred zygospores alternate with empty cells in Spirogyra in conjugation. The total number of daughter filaments formed will be

A. Scalariform, 400

B. Lateral, 100

C. Lateral, 400

D. Scalariform, 100

**Answer: B**



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7. Algin is a phycocolloid, obtained from the cell wall of

- A. Macrocystis and Porphyridium
- B. Mastigocladus and Laminaria
- C. Microcystis and Nereocystis
- D. Macrocystis and Fucus

**Answer: D**



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8. Which of the following is a red alga that is not red?

A. Nemaion

B. Polysiphonia

C. Gelidium

D. Batrachospermum

**Answer: D**



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9. In chlorophyceae, the flagella are

A. Tinsel type

B. Whiplash type

C. Whiplash and tinsel type

D. Basal tinsel, apical whiplash type

**Answer: B**



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**10.** Which of the following are useful for curing goiter?

A. Sea kelps

B. Diatoms

C. Red algae

D. Porphyra

**Answer: A**



**Watch Video Solution**

**11. Non-motile gametes are characteristically found in**

A. Cyanophyta

B. Rhodophyta

C. Phaeophyta

D. Chlorophyta

**Answer: B**



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**12.** The female sex organ in red algae is flask-shaped and is known as

A. Trichogyne

B. Carpogonium

C. Spermatium



D. Archegoniou,

**Answer: B**



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**13.** Some characters of algae are given below

a. Floridean starch

b. Sulphated phycocolloids in cell wall

c. Alginic acid

d. Trumpet hypha

e. Haplodiplontic life cycle

f. Isomorphic alternation of generation

g. Fucoxanthin

h. Phycoerythrin

i. Zygotic meiosis

j. Two anterior flagella

Which of the given set of characters belongs to Laminaria ?

A. a , b , e , f , h

B. c , d , e , g

C. b , c , d , e , f , g , i

D. c , d , e , f , g , i

**Answer: B**



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14. Bryophytes are not characterized by

- A. Sporophyte parasitic over gametophyte
- B. Independent gametophyte
- C. Absence of vascular tissues
- D. Independent sporophyte

**Answer: D**



**Watch Video Solution**

15. Stems and leaves of bryophytes are

- A. Analogous to vascular plants
- B. Homologous to vascular plants
- C. Analogous to algae & fungal thallus
- D. Non of these

**Answer: A**



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**16.** Non - vascular embryophyte with leaves is

- A. Riccia
- B. Porella

C. Selaginella

D. Macrocystis

**Answer: B**



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**17. Find set of features related to Funaria**

a. Protonema

b. Prothallus

c. Gametophore

d. Thallus body

e. NCC in antheridium

f. Haplodiplontic

g. True plant organs in sporophyte

h. Fragmentation

A. b , d , e , g

B. a , d , f , g

C. a , c , f , g , h

D. a , c , f , h

**Answer: D**



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18. In Funaria, 20 chromosomes are present in rhizoids, then the number of chromosomes in calyptra, theca and foot will be

A. 20 , 40 , 40 , respectively

B. 40 , 20 , 20 respectively

C. 20 , 40 , 20 respectively

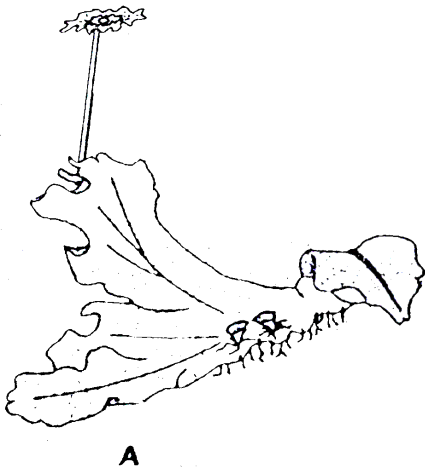
D. 40 , 10 , 20 respectively

**Answer: A**



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19. Identify the plants A and B in the figures given below



A. A - Female Marchantia, B - Sphagnum

B. A - Riccia , B - Marchantia

C. A - Marchantia, B - Funaria

D. A - Male Marchantia , B - Sphagnum



**Answer: D**



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20. Algae, bryophyte, and pteridophytes resemble with each other in which one of the following feature?

- A. Gametophytic plant body
- B. Dependence on water for fertilisation
- C. Haplontic alternation of generation
- D. Presence of embryo

**Answer: B**



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**21.** Find the correct statement for the prothallus of fern.

A. Monoecious , protandrous with multicellular rhizoides

B. Monoecious , protandrous with unicellular rhizoides

C. Dioecious , with unicellular rhizoides

D. Monoecious , protandrous with apical antheridia and basal archegonia on ventral surface

**Answer: B**



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**22.** The dominant photosynthetic phase in the life cycle of pteridophyta is equivalent to the

A. Gametophytic phase of bryophyta

B. Sporophytic phase of bryophyta

C. Gametophytic phase of pteridophytes

D. Gametophytic phase of gymnosperm

**Answer: A**



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**23.** In pteridophytes, reduction division takes place  
in :-

A. Prothallus is formed

B. Sex organs are formed

C. Spores are formed

D. Gametes are formed

**Answer: C**



**Watch Video Solution**

**24.** The evolutionary advanced features of Selaginella are

(a) Heterospory

(b) Endosporic development of gametophyte

(c) Reduced gametophyte

(d) Localization of sporangium bearing appendages

in strobili

(e) Unisexual gametophytes

(f) Fertilization with the help of water

A. All are correct

B. All except (f) is correct

C. All except (e) and (f) are correct

D. All except (c ) is correct

**Answer: B**



**Watch Video Solution**

**25.** How many structures listed below are diploid for a typical fern member ?

- a. Indusium cell
- b. Stomium cell
- c. NCC
- d. Rhizome cell
- e. Sporophyll cell
- f. Prothallus cell
- g. SMC
- h. Spore
- i. Antherozoid mother cell

A. Nine

B. Six

C. Five

D. Seven

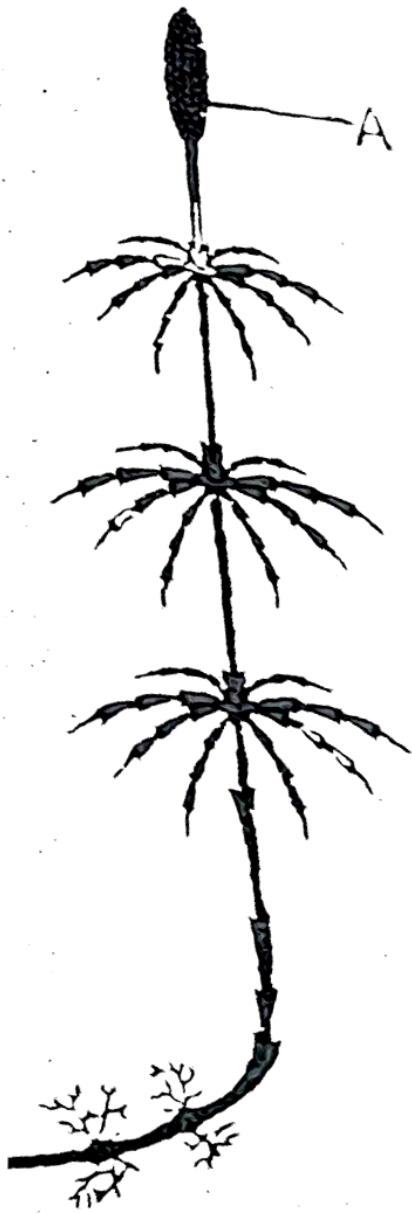
**Answer: C**



**Watch Video Solution**

**26.** Mark the correct statement for the organism given below in figure .





A. The structure labelled A is male cone

B. It is member of sphenopsida

C. Nodes are hollow while internodes are solid

D. This is commonly called as stonewort

**Answer: B**



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**27.** Endospermic, perispermic, polycotyledonous, and winged seeds having member of plantae also show

A. Sulphur shower

B. Largest ovule

C. Double fertilization

D. Placentation

**Answer: A**



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**28.** Which one constitutes the dominant vegetation in colder regions?

A. Monocots

B. Dicots

C. Legumes

## D. Gymnosperms

**Answer: D**



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**29. Which of the given sets are matched correctly ?**

- a. Chondrus - Algin
- b. Gracilaria - Agar
- c. Cycas - Coralloid root
- d. Pinus - Canada balsum
- e. Adiantum - Walking fern
- f. Lycopodium - Cord moss

g. Cedrus - Independent gametophyte

h. Sequoia - Tallest gymnosperm

A. b , c , e , h

B. a , b , c , e , f

C. b , c , e , g , h

D. b , c , d , e , g , h

**Answer: A**



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**30.** How many generations are present in the seed of gymnosperm ?

A. 2

B. 3

C. 1

D. 4

**Answer: B**



**Watch Video Solution**

**31.** Gametophytic plant body is non-vascular in

A. Algae and liverworts

B. Mosses and ferns

C. Gymnosperms and angiosperms

D. All of these

**Answer: D**



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**32.** The endosperm of gymnosperm is ontogenetically similar to angiospermic

A. Endosperm

B. Embryo sac

C. Archegonium

D. Megasporangia

**Answer: B**



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**33.** Flowering plants are more successful than other members of the plant world because

A. They are large and have a good vascular tissue system

B. They carry out variety of pollination mechanism



C. The protected plant embryo can survive in the period of unfavourable conditions

D. All of these

**Answer: D**



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**34.** A. Heterospory is found in all members of pteropsida

B. Selaginella is advance among pteridophytes as it produces seeds

C. Pinus leaves are monomorphic , pinnate

compound and have sunken stomata as adaptation  
transpiration

D. Sporic meiosis is characteristic of life cycle in many organisms like Volvox , Chlamydomonas and Ulothrix .

A. All are incorrect

B. Both B and C are correct

C. Only B is correct

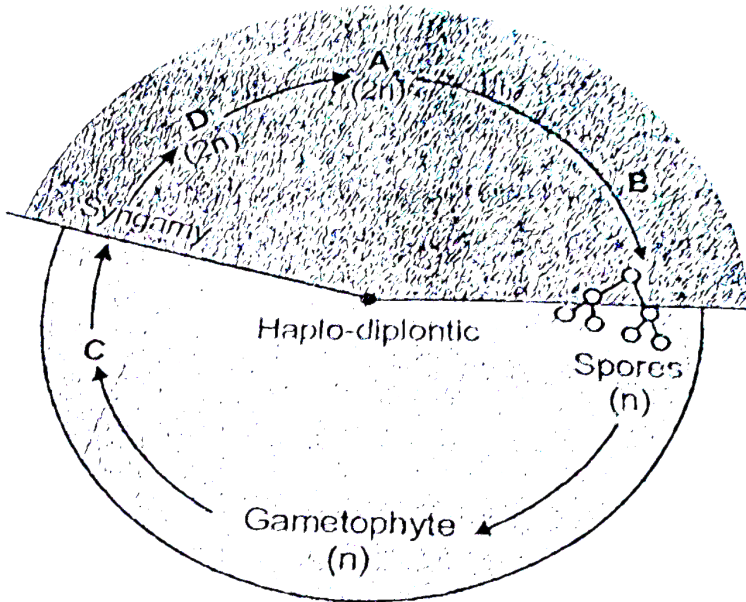
D. Only D is incorrect

**Answer: A**



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35. Identify the labels A , B , C , and D in the figure given below



A. A - Sporophyte , B - Meiosis

C - Gametogenesis , D - Endosperm

B. A - Sporophyte , B - Mitosis

C - Gametogenesis , D - Zygote

C. A - Gametophyte , B - Meiosis

C - Gametogenesis , D - Zygote

D. A - Sporophyte , B - Meiosis

C - Gametogenesis , D - Zygote

**Answer: D**



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## Assignment Section C Previous Years Questions

1. Conifers are adapted to tolerate extreme environmental conditions because of

A. Broad hardy leaves

B. Superficial stomata

C. Thick cuticle

D. Presence of vessels

**Answer: C**



**Watch Video Solution**

2. Which one of the following statements is wrong ?

A. Algae increase the level of dissolved oxygen in the immediate environment

B. Algin is obtained from red algae , and carrageenan from brown algae

C. Agar - agar is obtained from Gelidium and Gracilaria

D. Laminaria and Sargassum are used as food

**Answer: B**



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**3. Select the correct statement**

- A. The leaves of gymnosperms are not well adapted to extremes of climate
- B. Gymnosperms are both homosporous and heterosporous
- C. Salvinia , Ginkgo and Pinus all are gymnosperms
- D. Sequoia is one of the tallest trees

**Answer: D**



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4. Which one is a wrong statement?

A. Brown algae have chlorophyll a and c , and fucoxanthin

B. Archegonia are found in Bryophyta , Pteridophyta and Gymnosperms

C. Mucor has biflagellate zoospores

D. Haploid endosperm is typical feature of gymnosperms

**Answer: C**



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5. Read the following five statements (A to E) and select the option with all correct statement

(A) Mosses and Lichens are the first organisms to colonise a bare rock.

(B) Selaginella is a homopourous pteridophyte.

(C) Coralloid roots in Cycas have VAM.

(D) Main plant body in bryophytes is gametophytic whereas in pteridophytes it is sporophytic.

(E) In Gymnoperms, male and female gametophytes are present within sporangla located on sporophyte.

A. (B) , (C ) , and (E)

B. (A) , (C ) and (D)

C. (B) , (C ) and (D)

D. (A) , (D) and (E)

**Answer: D**



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**6.** In which of the following, gametophyte is not independent in free living ?

A. Pinus

B. Funaria

C. Marchantia

D. Pteris

**Answer: A**



**Watch Video Solution**

7. Which one of the following statements is wrong ?

A. Mannitol is stored food in Rhodophyceae

B. Algin and carrageen are products of algae

C. Agar - agar is obtained from Gelidium and

Gracilaria

D. Chlorella and Spirulina are used as space food

**Answer: A**



**Watch Video Solution**

**8. Male gametes are flagellated in**

A. Spirogyra

B. Polysiphonia

C. Anabeana

D. Ectocarpus

**Answer: D**



**Watch Video Solution**

9. Which of the following is responsible for peat formation?

A. Marchantia

B. Riccia

C. Funaria

D. Sphagnum

**Answer: D**



**Watch Video Solution**

10. Male gametophyte with least number of cells is present in

A. Pteris

B. Funaria

C. Liliium

D. Pinus

**Answer: C**



**Watch Video Solution**

11. Which one of the following shows isogamy with non-flagellated gametes

A. Sargassum

B. Ectocarpus

C. Ulothrix

D. Spirogyra

**Answer: D**



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12. Select the wrong statement

- A. Anisogametes differ either in structure, function or behaviour
- B. In Oomycetes female gamete is smaller and motile, while male gamete is larger and non - motile
- C. Chlamydomonas exhibits both isogamy and anisogamy and Fucus shows oogamy
- D. Isogamy are similar in structure , function and behaviour

**Answer: B**



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13. Monoecious plant of Chara shows occurrence of

A. Stamen and carpel on the same plant

B. Upper antheridium and lower oogonium on  
the same plant

C. Upper oogonium and lower antheridium on  
the same plant

D. Antheridiophore and archegoniophore on the  
same plant

**Answer: C**





14. Read the following statement (A-E) and answer the question which follows them

(A) In liverworts, mosses and ferns gametophytes are free living

(B) Gymnosperms and some ferns are heterosporous

(C) Sexual reproduction in *Fucus*, *Volvox* and *Albugo* is oogamous

(D) The sporophyte in liverworts is more elaborate than that in mosses

(E) Both, *Pinus* and *Marchantia* are dioecious

How many of the above statements are correct

A. two

B. Three

C. Four

D. One

**Answer: B**



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**15.** Which one of the following pairs is wrongly matched ?

A. Ginkgo - Archegonia

B. Salvinia - Prothallus

C. Viroids - RNA

D. Mustard - Synergids

**Answer: B**



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**16.** Gymnosperms are also called soft wood spermatophytes because they lack

A. Thick - walled tracheids

B. Xylem fibres

C. Cambium

D. Phloem fibres

**Answer: B**



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17. Which one of the following is common to multicellular fungi, filamentous algae and protonema of mosses

A. Multiplication by fragmentation

B. Diplontic life cycle

C. Members of kingdom plantae

D. Mode of Nutrition

**Answer: A**



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**18.** Cycas and Adiantum resemble each other in having

A. Cambium

B. Vessels

C. Seeds

## D. Motile Sperms

**Answer: D**



**Watch Video Solution**

**19.** Which one of the following is correct statement

A. Antheridiophores and archegoniophores are present in pteridophytes

B. Origin of seed habit can be traced in pteridophytes

C. Pteridophyte gametophyte has a protonemal and leafy stage

D. In gymnosperms , female gametophyte is freeliving

**Answer: B**



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**20.** Read the following five statements (A-E) and answer as asked next to them

(A) In Equisetum the female gametophyte is retained on the parent sporophyte



(A) In Equisetum the female gametophyte is retained on the parent sporophyte

(B) In ginkgo male gametophyte is not independent

(C) Sexual reproduction in Volvox is isogamous

(E) The spores of slime moulds lack cell walls

How many of the above statements are correct

A. Two

B. Three

C. Four

D. One

**Answer: D**



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21. Selaginella and Salvinia are considered to represent a significant step toward evolution of seed habit because

A. Megaspores possess endosperm and embryo surrounded by seed coat

B. Embryo develops in female gametophyte which is retained on parent sporophyte

C. Female gametophyte is free and gets dispersed like seeds

D. Female gametophyte lack archegonia

**Answer: B**

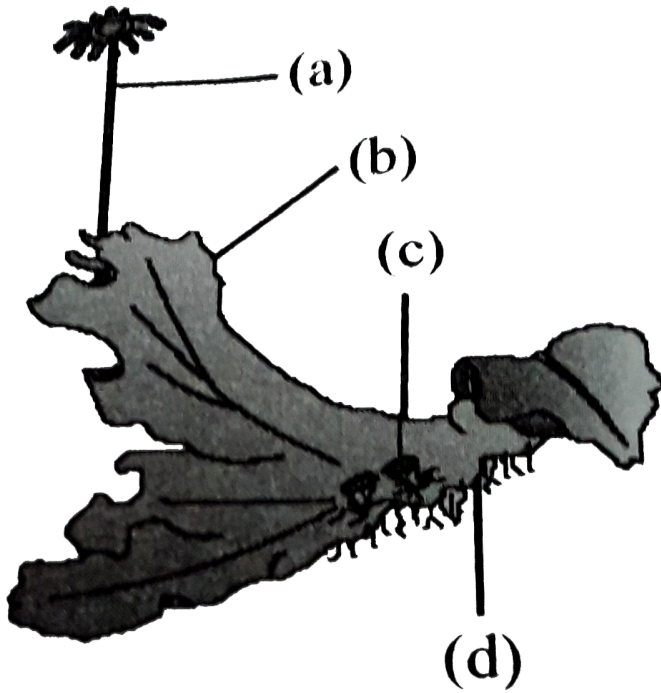


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**22.** Examine the figure given below and select the right option given all the four parts (a,b,c,d)

correctly

identified.



A. a - Seta

b - Sporophyte

c - Protonema

d - Rhizoids

B. a - Antheridiophore

b - Male thallus

c - Globule

d - Roots

C. a - Archegoniophore

b - Female thallus

c - Gemmacup

d - Rhizoids

D. a - Archegoniophore

b - Female thallus

c - Bud

d - Foot

**Answer: C**



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**23.** Consider the following four statements whether they are correct or wrong.

(A) The sporophyte in liverworts is more elaborate than that in mosses.

(B) Salvinia is heterosporous.

(C ) The life cycle in all seed-bearing plants is

diplontic.

(D) In *Pinus*, male and female cones are borne on different trees.

The two wrong statements together are

A. (B) and (C )

B. (A) and (B)

C. (A) and (C )

D. (A) and (D)

**Answer: D**



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24. Archegoniophore is present in

A. Funaria

B. Marchantia

C. Chara

D. Adiantum

**Answer: B**



**Watch Video Solution**

25. The gametophyte is not an independent, free-living generation in



A. Pinus

B. Polytrichum

C. Adiantum

D. Marchantia

**Answer: A**



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**26.** Compared with the gametophytes of the bryophytes, the gametophytes of vascular plants tend to be:-

- A. Smaller and to have smaller sex organs
- B. Smaller but to have larger sex organs
- C. Larger but to have smaller sex organs
- D. Larger and to have larger sex organs

**Answer: A**



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**27. Which one of the following plants is monoecious**

- A. Marchantia
- B. Cycas

C. Pinus

D. Date palm

**Answer: C**



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**28.** Male and female gametophytes are independent and free-living in

A. Sphagnum

B. Mustard

C. Castor

D. Pinus

Answer: A

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29. Examine the figure A,B,C and D. In which one of the four options all the items A,B,C and D are correct



(B)



(C)



(D)



A.           A                    B                    C                    D  
Chara   Marchantia   Fucus   Pinus

B.

          A                    B                    C                    D  
Equisetum   Ginkgo   Selaginella   Lycopodium

C.           A                    B                    C                    D  
Selaginella   Equisetum   Salvinia   Ginkgo

D.           A                    B                    C                    D  
Funaria   Adiantum   Salvinia   Riccia

**Answer: C**



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**30.** Which one of the following plants is monoecious

A. Pinus

B. Cycas

C. Papaya

D. Marchantia

**Answer: A**



**Watch Video Solution**

**31.** Which one of the following has haplontic life cycle

A. Polytrichum

B. Ustilago

C. Wheat

D. Funaria

**Answer: B**



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**32.** Phylogenetic system of classification is based on

A. Morphological features

B. Chemical constituents

C. Floral characters

D. Evolutionary relationships

**Answer: D**



**Watch Video Solution**

**33. Mannitol (sugar alcohol) is the stored food in**

A. Porphyra

B. Fucus

C. Gracillaria

D. Chara

**Answer: B**



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**34.** Which one of the following is considered important in the development of seed habit

Or

Selaginella has the character of evolutionary importance. That character is

- A. Heterospory
- B. Haplontic life cycle
- C. Free - living gametophyte
- D. Dependent sporophyte

**Answer: A**



35. Select one of the following pairs of important features distinguishing Gnetum from Cycas and Pinus and showing affinities with angiosperms

- A. Embryo development and apical meristem
- B. Absence of resin duct and leaf venation
- C. Presence of vessel elements and absence of archegonia
- D. Perianth and two integuments

**Answer: C**

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36. Which of the following is heterosporous

A. Equisetum

B. Dryopteris

C. Salvinia

D. Adiantum

**Answer: C**

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**37.** In which one of the following male and female gametophytes do not have free living independent existence

A. Cedrus

B. Pteris

C. Funaria

D. Polytrichum

**Answer: A**



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**38.** In the prothallus of a vascular cryptogam, the antherozoids and egg mature and different time As a result.

A. Self fertilization is prevented

B. There is no change in success rate of fertilization

C. There is high degree of sterility

D. One can conclude that the plant is apomictic

**Answer: A**



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**39.** If you are asked to classify the various algae into distinct groups, which of the following characters you should choose

- A. Chemical composition of the cell wall
- B. Types of pigments present in the cell
- C. Nature of stored food materials in the cell
- D. Structural organization of thallus

**Answer: B**



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40. Flagellated male gametes are present in all the three of which one of the following sets

- A. Riccia , Dryopteris and Cycas
- B. Anthoceros , Funaria and Spirogyra
- C. Zygnema , Saprolegnia and Hydrilla
- D. Fucus , Marsilea and Calotropis

**Answer: A**



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41. In gymnosperms the pollen chamber represents

- A. The microsporangium in which pollen grains develop
- B. A cell in the pollen grain in which the sperms formed
- C. A cavity in the ovule in which pollen grains are stored after pollination
- D. An opening in the mega gametophyte through which the pollen tube approaches the egg

**Answer: C**



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42. Spore dissemination in some liverworts is aided by

A. Peristome teeth

B. Elaters

C. Indusium

D. Calyptra

**Answer: B**



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**43.** Moss peat is used as a packing material for sending flowers and live plants to distant places because

- A. It is easily available
- B. It is hygroscopic
- C. It reduces transpiration
- D. It serves as a disifectant

**Answer: B**



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44. Conifers differ from grasses in the

- A. Production of seeds from ovules
- B. Lack of xylem tracheids
- C. Absence of pollen tubes
- D. Formation of endosperm before fertilization

**Answer: D**



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45. In a moss the sporophyte

A. Is partially parasitic on the gametophyte

B. Produces gametes that give rise to the gametophyte

C. Arises from a spore produced from the gametophyte

D. Manufactures food for itself , as well as for the gametophyte

**Answer: A**



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**46.** Match items in Column - I with those in Column -

II

Column -I		Column -II
a. Peritrichous flagellation	(i)	Ginkgo
b. Living fossil	(ii)	Macrocystes
c. Rhizophore	(iii)	Esherichia coil
d. Smallest flowering plant	(iv)	Selaginella
e. Largest pernnial alga	(v)	Wolffia

Select the correct answer from the following :

A. a (ii) , b (i) , c (ii) , d (iv) , e (v)

B. a (v) , b (iii) , c (ii) , d (v) , e (i)

C. a (i) , b (iii) , c (v) , d (iii) , e (ii)

D. a (iii) , b (i) , c (iv) , d (v) , e (ii)

**Answer: D**



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47. Ectophloic siphonostele is found in

- A. Adiantum and Cucurbitaceae
- B. Osmunda and Equisetum
- C. Marsilea and Botrychium
- D. Dicksonia and maiden hair fern

**Answer: B**



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**48.** Top-shaped multiciliate male gametes, and the mature seed which bears only one embryo with two cotyledons, are characteristic features of

- A. Polypetalous angiosperms
- B. Gamopetalous angiosperms
- C. Conifers
- D. Cycads

**Answer: D**



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49. A system of classification in which a large number of traits are considered is

- A. Natural system
- B. Phylogenetic system
- C. Artificial system
- D. Synthetic system

**Answer: A**



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50. Genera Plantarum was written by



A. Engler & Prantl

B. Bentham & Hooker

C. Bessey

D. Hutchinson

**Answer: B**



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**51. Phylogenetic classification is based on**

A. Overall similarities

B. Utilitarian system

C. Habits of plants

D. Common evolutionary descent

**Answer: D**



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**52.** According to which phylogenetic system , dicots are advance with sympetalae conditions ?

A. Bentham & Hooker's

B. Engler & Prantl

C. Hutchinson

D. Takhtajan

**Answer: B**



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**53.** Phenetic classification of organisms is based on

A. The ancestral lineage of existing organisms

B. Observable characteristics of existing organisms

C. Dendrograms based on DNA characteristics

D. Sexual characteristics

**Answer: B**



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**54.** Which one of the following is wrongly matched ?

- A. Nostoc - Water blooms
- B. Spirogyra - Motile gametes
- C. Sargassum - Chlorophyll c
- D. Basidiomycetes - Puffballs

**Answer: B**



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55. In chlorophyceae , the mode of sexual reproduction is

- A. Isogamy
- B. Anisogamy
- C. Oogamy
- D. All of these

**Answer: D**



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56. An alga as the source of protein is

A. Chlorella

B. Nostoc

C. Spirogyra

D. Ulothrix

**Answer: A**



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57. Ulothrix be described as a

- A. Filamentous alga lacking flagellated reproductive stages
- B. Coenobial alga producing zoospores
- C. Filamentous alga with flagellated reproductive stages
- D. Non - motile colonial alga lacking zoospores

**Answer: C**



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**58.** Sexual reproduction of Spirogyra is an advanced feature as it shows

- A. Different sizes of motile sex organs
- B. Same size of motile sex organs
- C. Morphologically different sex organs
- D. Physiologically differentiated sex organs

**Answer: D**



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**59.** Pyrenoids are made up of



- A. Proteinaceous centre and starchy sheath
- B. Core of nucleic acid surrounded by 7 protein sheath
- C. Core protein surrounded by fatty sheath
- D. Core of starch surrounded by sheath of protein

**Answer: A**



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**60.** Brown algae is characterised by the presence of

A. Fucoxanthin

B. Haemastochrome

C. Phycocyanin

D. Phycoerythrin

**Answer: A**



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**61.** Ulothrix filaments produce

A. Heterogametes

B. Basidiospores

C. Isogametes

D. Anisogametes

**Answer: C**



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**62.** The plant body is thalloid in

A. Funaria

B. Sphagnum

C. Salvinia

D. Marchantia

**Answer: D**



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**63.** In bryophytes

A. Both generations are independent

B. Gametophytes are dependent upon  
sporophytes

C. Sporophytes complete their life cycle

D. Sporophytes are dependent upon  
gametophytes

**Answer: D**



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**64.** Which of the following plant kingdom is called 'amphibians' ?

A. Gymnosperm

B. Thallophyta

C. Tracheophyta

D. Bryophyta

**Answer: D**



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65. Bryophytes can be separated from algae, because they

- A. Possess archegonia
- B. Conatain chloroplast
- C. Are thalloid forms
- D. Have no conducting tissue

**Answer: A**



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66. Bryophytes are dependent on water because

A. Water is essential for their vegetative propagation

B. The sperms can easily reach upto egg in the archegonium

C. Archegonium has to remain filled with water for fertilization

D. Water is essential for fertilization for their homosporous nature

**Answer: B**





67. Bryophytes comprise

- A. Dominant phase of gametophyte which produces spores
- B. Small sporophyte phase and generally parasitic on gametophyte
- C. Sporophyte is of longer duration
- D. Dominant phase of sporophyte which is parasitic

**Answer: B**





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68. The antherozoids of Funaria are

- A. Multiciliated
- B. Monociliated
- C. Aciliated
- D. Biciliated

**Answer: D**



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69. Plant body of funaria is

- A. Completely sporophyte
- B. Predominantly gametophyte with sporophyte
- C. Completely gametophyte
- D. Predominantly sporophyte with gametophyte

**Answer: A**



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70. Which of the following is true about bryophytes

- A. They are thalloid
- B. They possess archegonia
- C. They contain chloroplast
- D. All of these

**Answer: D**



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71. Multicellular branched rhizoids and leafy gametophytes are the characteristics of

- A. Some bryophytes

B. Pteridophytes

C. All bryophytes

D. Gymnosperms

**Answer: A**



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**72.** Elater mechanism for seed dispersal is exhibited by

A. Liverworts

B. Marchantia

C. Riccia

D. Funaria

**Answer: B**



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**73.** Dichotomous branching is found in

A. Liverworts

B. Pteridophytes

C. Fern

D. funaria

**Answer: A**



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**74.** The walking fern is so named because

- A. It propagates vegetatively by its leaf tips
- B. It knows how to walk by itself
- C. Its spores are able to walk
- D. It is dispersed through the agency of walking animals

**Answer: A**



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75. Plants having vascular tissues but lacking seeds are

A. Pteridophytes

B. Gymnosperms

C. Algae

D. Bryophytes

**Answer: A**



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76. Which aquatic fern performs nitrogen fixation :

A. Azolla

B. Nostoc

C. Salvia

D. Salvinia

**Answer: A**



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77. A well developed archegonium with neck consisting of 4 - 6 rows and neck canal cells ,



characterises

- A. Gymnosperms and flowering plants
- B. Pteridophytes and gymnosperms
- C. Gymnosperms only
- D. Bryophytes and pteridophytes

**Answer: D**



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**78.** Plants reproducing by spores such as mosses and ferns are grouped under the general term:-

A. Cryptogams

B. Bryophytes

C. Sporophytes

D. Thallophytes

**Answer: A**



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**79.** Which of the following is a vascular cryptogam

A. Cedrus

B. Equisetum

C. Ginkgo

D. Marchantia

**Answer: B**



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**80.** Heterospory and seed habit are often discussed in relation to a structure called .

A. Petiole

B. Ligule

C. Bract

D. Spathe

**Answer: B**



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**81.** What is common in all the three Funaria, Dryopteris and Ginkgo

- A. Independent sporophyte
- B. Presence of archegonia
- C. Well developed vascular tissues
- D. Independent gametophyte

**Answer: B**



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**82.** In *Pinus*, the wing of the seed develops from

A. Ovuliferous scale

B. Integument

C. Nucellus

D. Bract

**Answer: A**



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**83.** The smallest plant group gymnosperms has how many species?

A. 640

B. 300

C. 1000

D. 900

**Answer: D**



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**84.** Which one of the following statements about *Cycas* is incorrect ?

A. It has circinate vernation

B. Its xylem is mainly composed of xylem vessel

C. Its roots contain blue - green algae

D. It does not have a well organized female  
flower

**Answer: B**



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85. Largest sperms in the plants world are found in

A. Banyan

B. Cycas

C. Thuja

D. Pinus

**Answer: B**



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86. Transfusion tissue is present in the leaves of

A. Pinus



B. Dryopteris

C. Cycas

D. Both (1) & (3)

**Answer: D**



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**87.** The endosperm of gymnosperm is

A. Diploid

B. Polyploid

C. Triploid

D. Haploid

**Answer: D**



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**88.** Plant group with largest ovule , largest tree , and largest gametes is

A. Gymnosperm

B. Angiosperm

C. Bryophyta

D. Pteridophyta

**Answer: A**



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**89.** Which of the following plants produces seeds but not flowers : -

A. Maize

B. Mint

C. Peepal

D. Pinus

**Answer: D**



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90. Cycas has two cotyledons but it is not included under angiosperms because it has

- A. Naked ovules
- B. Seeds like monocot
- C. Circinate ptyxis
- D. Compound leaves

**Answer: A**



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91. Which one of the following is a living fossil

A. Cycas

B. Moss

C. Saccharomyces

D. Spirogyra

**Answer: A**



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92. Which of the following is without exception in angiosperms ?

- A. Presence of vessels
- B. Syngamy
- C. Secondary growth
- D. Autotrophic nutrition

**Answer: B**



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**93.** Which one of the following pairs of plants are not seed producers?

- A. Fern and Funaria

B. Funaria and Ficus

C. Ficus and Chlamydomonas

D. Punica and Pinus

**Answer: A**



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**94.** Angiosperms have dominated the land flora primarily by their

A. Power of adaptability in diverse habitat

B. Property of producing large number of seeds

C. Nature of self pollination

D. Domestication by man

**Answer: A**



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**95.** Transport of food material in higher plants takes place through

A. Companion cells

B. Transfusion tissue

C. Tracheids



D. Sieve elements

**Answer: D**



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**96.** An alga which can be employed as food for humna being is

A. Ulothrix

B. Chlorella

C. Spirogyra

D. Polysiphonia

**Answer: B**



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**Assignment Section D Assertion Reason Type Questions**

1. Assertion: Thallophytes are non-vascular, non-archegoniate, and non-cormophytic plants.

Reason: Thallophytes lack vascular bundles, archegonia, and differentiated plant body.

A. If the Assertion & Reason are true and the reason is the correct. Explanation of the

assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: A**



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2. Assertion: *Funaria* archegonium has maximum concentration of sucrose at the tip of neck.

Reason: Male gametes show chemotropic movement.

A. If the Assertion & Reason are true and the reason is the correct explanation of the assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: C**

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3. Assertion: Pyrenoids may or may not be surrounded by a sheath of starch plates in algae.

Reason: In higher plants, these are replaced by amyloplasts.

A. If the Assertion & Reason are true and the reason is the correct. Explanation of the assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: B**



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4. Assertion: Seeds are formed by some species of spike moss.

Reason: All conditions for seed habit are fulfilled by these species of spike moss.

A. If the Assertion & Reason are true and the reason is the correct explanation of the assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the

assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: D**



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5. A : Endosperm in Cycas is haploid in nature.

R : Cycas roots shows association with oxyphoto - bacteria.



A. If the Assertion & Reason are true and the reason is the correct. Explanation of the assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: B**



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6. A : Sexual reproduction shows considerable variation in the type and formation of sex cells in members of chlorophyceae.

R : It may be isogamous, anisogamous and oogamous.

A. If the Assertion & Reason are true and the reason is the correct. Explanation of the assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: A**



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7. A : In mosses, second stage of gametophyte consists of upright, slender axes bearing spirally arranged leaves.

R : This stage of gametophyte consists of sex organs.

A. If the Assertion & Reason are true and the reason is the correct explanation of the assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: B**



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**8. A :** Events precursor to the seed habit is seen in some members of pteridophytes.

**R :** Development of the zygotes into young embryos take place within the female gametophyte.

A. If the Assertion & Reason are true and the reason is the correct. Explanation of the assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: A**



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9. A : Different plant groups show different patterns of life cycles.

R : During life cycle there is alternation of generation between diploid gametophyte and haploid sporophyte.

A. If the Assertion & Reason are true and the reason is the correct. Explanation of the assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: C**



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**10. A :** Microspores and megaspores are produced in same lax in gymnosperms.

**R :** Lax represents compact strobilus which bear microsporophyll and megasporophyll.

A. If the Assertion & Reason are true and the reason is the correct explanation of the assertion.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion.

C. If Assertion is true statement but Reason is false.

D. If both Assertion and Reason are false statements.

**Answer: D**



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