



BIOLOGY

PHYSICS WALLAH

PLANT KINGDOM

Level 1

1. A rigid cell wall is usually seen in members of chlorophyoeae. This cell wall is constituted of

A. Cellulose (outer layer) and algin (inner layer)

B. Chitin (outer layer) and pectose (inner layer)

C. Cellulose (inner layer) and pectose (outer layer)

D. Pectose (inner layer) and peptidoglycan (outer layer)

Answer: C



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2. In majority of the Pteridophytes all the spores are of similar kind such plants are called:-

A. Homosporous

B. Heterosporous

C. Prothallus

D. Protonema

Answer: A



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3. Which one of the following is not a character of brown algae?

- A. Presence of chlorophyll a and b
- B. It remains attached to substratum
- C. Presence of chlorophyll a and c
- D. Presence of fucoxanthin

Answer: A



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4. How many species of marine algae are used as food?

A. 17

B. 7

C. 70

D. 71

Answer: C



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5. A group of plants which are autotrophs, their reproductive system is hidden and also known as cryptogamae, and has fibre like body called:

A. Phycophytes

B. Lichens

C. Bryophytes

D. Angiosperms

Answer: A



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6. Which of the following is not a pteridophyte

A. Ginkgo

B. Selaginella

C. Polypodium

D. Azolla

Answer: A



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7. Volvox and Polysiphonia are members of algal class, A and B respectively. Which of the following statement is correct?

A. Cellulose and algin are cell wall components of members of A.

B. Floridean starch is stored food material in B.

C. Chlorophyll a, c and fucoxanthin are the photosynthetic pigments found in class A.

D. Two unequal flagella are found in members of B.

Answer: B



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8. Bryophytes are called amphibians of the plant kingdom. Why?

A. They require water to complete their life cycle

B. They require land to complete their life cycle

C. They require both land and water for survive

D. They require only marine water to complete their life cycle

Answer: C



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9. In gymnosperms, megaspore mother cell divides meiotically to form four megaspores. Out of four megaspores, one develops into a multicellular structure termed as:

A. Female gametophyte

B. Archegonium

C. Ovule

D. Strobili

Answer: A



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10. Which one of the following is called maiden - hair fern?

A. Dryopteris

B. Pteris

C. Adiantum

D. Lycopodium

Answer: C



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11. Plants having (spores), xylem and phloem but lacking seeds are

A. Pteridophytes

B. Gymnosperms

C. Bryophytes

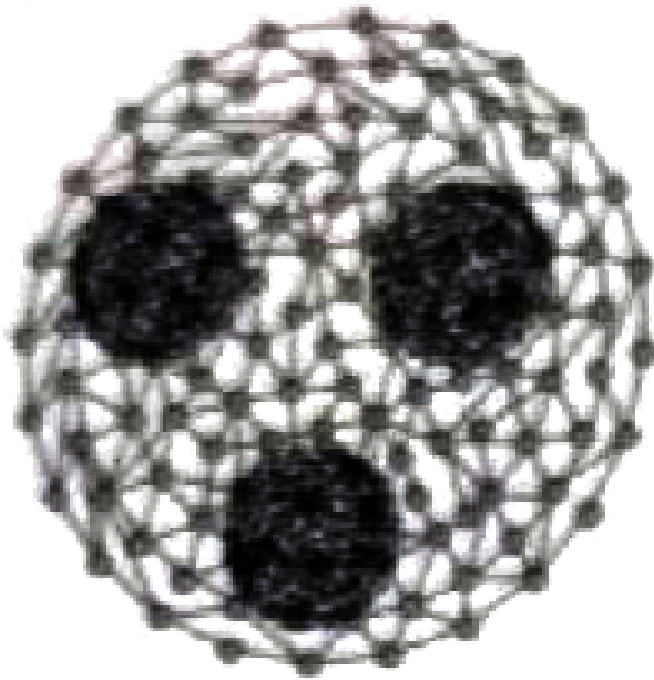
D. Angiosperms

Answer: A



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12. Select the option which gives correct information regarding.



A. A green algae and its cell wall possess cellulose, but lacks algin

B. A brown algae and its stored material is floridean starch.

C. A pteridophyte and is having protonema stage in its life cycle.

D. A moss and the plant body is thalloid.

Answer: A



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13. In angiosperms, polar nuclei fuse to produce

A. Diploid secondary nucleus

B. Zygote

C. Antipodal cells

D. Synergids

Answer: A



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14. A student observed an algae with chlorophyll 'a', 'd' and phycoerythrin. It should belong to:

- A. Phaeophyta
- B. Rhodophyta
- C. Chlorophyta
- D. Bacillariophyta

Answer: B



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15. 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. Statements (B) and (C)

B. Statements (A) and (B)

C. Statements (A) and (C)

D. Statements (A) and (D)

Answer: D



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16. Classification based on chromosome number, structure and behaviour is called

A. Numerical Taxonomy

B. Cytotaxonomy

C. Chemotaxonomy

D. Nuclear Taxonomy

Answer: B



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17. Match the items of column-I and II:

Column-I	Column-II
A. Microphylls	1. <i>Ginkgo</i>
B. Living fossil	2. <i>Monocotyledon</i>
C. Packaging material	3. <i>Selaginella</i>
D. Smallest flowering plant	4. <i>Sphagnum</i>
E. Largest perennial alga	5. <i>Volvox</i>

A. a-1, b-2, c-3, d-4, e-5

B. a-3, b-1, c-4, d-5, e-2

C. a-2, b-5, c-3, d-1, e-4

D. a-4, b-5, c-3, d-1, e-2

Answer: 2



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18. Ovules are naked in gymnosperm because:-

A. Fertilisation is absent

B. Ovary wall is absent

C. Archegonia are absent

D. Endosperm is absent

Answer: B



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Level 2

1. Dentist use the salts of alginic acid to take the measurement of dentury. These are

obtained from:

A. Red algae

B. Bacteria

C. Brown algae

D. Diatom

Answer: C



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2. In Mosses creeping, green, branched and frequently filamentous stage is called"-

A. Protonema

B. Rhizome

C. Rhizophore

D. Leafy stage

Answer: A



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3. Tracheophyta consists of

- A. Pteridophytes, gymnosperms and angiosperms
- B. Pteridophytes only
- C. Gymnosperms and angiosperms only
- D. Bryophytes only

Answer: A



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4. In Pteridophytes, sporophylls may form distinct compact structure, called:-

A. Strobili or cones

B. Microphyll

C. Macrophyll

D. Tropophyll

Answer: A



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5. Which algal groups have similarity in pigment composition ?

A. Red algae and brown algae

B. Green algae and blue green algae

C. Kelps and diatoms

D. Diatoms and euglenoids

Answer: C



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6. No zoospore formation has been observed in the algal members belonging to :-

A. Chlorophyceae

B. Xanthophyceae

C. Phaeophyceae

D. Cyanophyceae

Answer: D



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7. Green algae are considered as ancestors of higher plants due to their resemblance with higher plants in :-

A. Pigments

B. Cell wall

C. Stored food

D. All the above

Answer: D



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8. Pyrenoids are characteristically found in algae. A pyrenoid consists of :-

- A. Core of starch surrounded by protein
- B. Core of protein surrounded by starch
- C. Core of fatty acids covered by starch
- D. Nucleic acid and protein

Answer: B



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9. Plants of this group are diploid and well adapted to extreme conditions. They grow bearing sporophylls in compact structures called cones. The group in reference is

- A. Monocots
- B. Dicots
- C. Pteridophytes
- D. Gymnosperms

Answer: D



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10. Agar-agar is obtained from *Gelidium* and *Gracilaria*. It is used to grow microbes and in preparations of ice-creams and jellies. These are the members of:

A. Green Algae

B. Red Algae

C. Brown Algae

D. Blue green Algae

Answer: B



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11. Oogonia of Thallophyta differs with archegonia of bryophyta :-

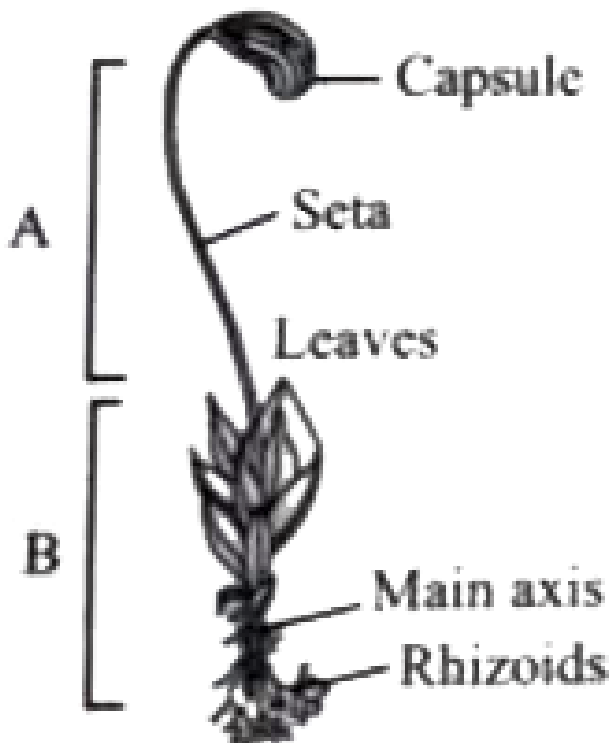
- A. Being multicellular
- B. Being jacketed
- C. Being stalked
- D. Being unicellular and jacketless

Answer: D



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12. Choose the true statement:



A. A is sporophyte and is independent

B. A is sporophyte and is dependent on B,
which is gametophyte

C. B is sporophyte and is independent

D. B is sporophyte and is dependent on A
for food, which is gametophyte

Answer: B



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13. In some algae, one large, non-motile female gamete fuse with smaller, motile male gamete.

Such a type of reproduction is called:

A. Isogamy

B. Anisogamy

C. Oogamy

D. Gametangial contact

Answer: C



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14. Which of the following is not correctly matched?

A. Heterocyst - N_2 -fixation structure of BGA

B. Hormogonia = Reproductive structure of
BGA

C. Floridean starch = Stored food of brown
algae

D. Laminarin = Stored food of brown algae

Answer: C



15. The unique feature of Bryophytes compared to other green plant groups is that

:-

A. They produce spores

B. They lack vascular tissue

C. They lack root

D. Their sporophyte is attached to gametophyte

Answer: D



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16. A leafy gametophyte plant with multicellular rhizoids and sporophyte differential in foot, seta and capsule should belong to :-

A. Algae

B. Pteridophytes

C. Bryophytes

D. Gymnosperms

Answer: C



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17. Bryophyta like to grow in moist places because:

A. Of absence of roots, they have to absorb the moisture from water ground

B. Male gametes require water for swimming

C. They do not have waterproof coating of cutin on their aerial surface to prevent the loss of water

D. All the above

Answer: D



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18. Bryophyta are ecologically important plants as they are :-

- A. Best producer in nature
- B. Pioneer in succession on barren lands
- C. Decomposers
- D. Nitrifying plants

Answer: B



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19. Which of the following is deemed to be vital in the development of seed habit?

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

Answer: A



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20. In bryophyta, organs are referred to as 'Leaf like' and 'Stem like' and not the true leaf and stem because:-

- A. They lack vascular tissues
- B. They are non-green
- C. They do not function as leaf and stem
- D. All the above

Answer: A



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21. Adiantum is called "walking fern" due to

- A. Power of locomotion
- B. Vegetative reproduction
- C. Motile antherozoites
- D. All the above

Answer: B



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22. Aquatic fern which supports the growth of blue green alge, Anabaena and used to increase the yield of paddy crop is :-

A. Salvinia

B. Marsilea

C. Isoetes

D. Azolla

Answer: D



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23. Presence of motile stage in life cycle & requirement of water as a medium to complete life cycle is diagnostic characters of

- A. Thallophyta
- B. Bryophyta
- C. Pteridophyta
- D. Cryptogams

Answer: D



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24. Coralloid roots of *Cycas* has

A. *Anabaena*

B. *Azolla*

C. *Mycorrhizae*

D. *Rhizopus*

Answer: A



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25. Double fertilization and triple fusion are characteristic of:-

A. Spermatophyta

B. Gymnosperms

C. Pteridophyta

D. Angiosperms

Answer: D



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26. Blue green algae store food in the form of α -granules and β -granules α -granules are composed of cyanophycean starch and β -granules are composed of fat droplets. This cyanophycean starch is structurally related to:

A. Glycogen

B. Mannitol

C. Laminarin

D. Paramylum

Answer: A





27. Match the columns I and II, and choose the correct combination from the options given.

Column - I	Column - II
A. Haplontic life cycle	i. Gymnosperms and angiosperms
B. Diplontic life cycle	ii. <i>Spirogyra</i>
C. Haplodiplontic life cycle	iii. Bryophytes and pteridophytes

A. $A - i, B - ii, C - iii$

B. $A - iii, B - i, C - ii$

C. $A - ii, B - i, C - iii$

D. $A - ii, B - iii, C - i$

Answer: C



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28. In Phaeophyceae, the gametes are

A. Pyriform and bear 2 flagella (one longitudinal and one transverse)

B. Pear-shaped and bear 2 flagella that are laterally

C. Pyriform and bear 2-8, equal and apical flagella

D. Pear-shaped and bear 2-8, equal and apical flagella

Answer: B



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29. The life cycle of Ectocarpus and Polysiphonia is:

A. Haplo-diplontic

B. Haplontic

C. Diplontic

D. Both haplontic and diplontic

Answer: A



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30. Which one of the following is not an ecological of moss plants?

A. Some mosses provide food for herbaceous mosses birds and other animals

B. Very high water holding capacity of mosses is used trans-shipment of non-living materials

C. Mosses along with lichens are the pioneering to colonise rocks

D. Mosses form dense mats on the soil and reduce impact of falling rain

Answer: B



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Neet Past 10 Years Questions

1. Which of the following pairs is of unicellular algae?

A. Gelidium and Gracilaria

B. Anabaena and Volvox

C. Chlorella and Spirulina

D. Laminaria and Sargassum

Answer: C



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2. Floridean starch has structure similar to

A. Amylopectin and glycogen

B. Mannitol and algin

C. Laminarin and cellulose

D. Starch cellulose

Answer: A



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3. Strobili or cones are found in:

A. Pteris

B. Marchantia

C. Equisetum

D. Salvinia

Answer: C



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4. Male and female gametophytes do not have an independent free living existence in:-

A. Algae

B. Angiosperms

C. Bryophytes

D. Pteridophytes

Answer: B



5. Phycoerythrin is the major pigment in:

A. Blue green algae

B. Green algae

C. Brown algae

D. Red algae

Answer: D



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6. Which of the following statements is incorrect in gymnosperms gametophytes?

A. Male and female gametophytes are free living

B. Most of them have narrow leaves with thick cuticle

C. Their seeds are not covered

D. They are heterosporous

Answer: A





7. From evolutionary point of view, retention of the female gametophyte with developing young embryo on the parent sporophyte for some time, is first observed in :

- A. Liverworts
- B. Mosses
- C. Pteridophytes
- D. Gymnosperms

Answer: C



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8. Pinus seed cannot germinate and establish without fungal association. This is because

A. Its embryo is immature.

B. It has obligate association with mycorrhizae.

C. It has very hard seed coat.

D. Its seeds contain inhibitors that prevent germinatics

Answer: B



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9. Which of the following statement is correct?

A. Ovules are not enclosed by ovary wall in gymnosperum

B. Selaginella is heterosporous, while

Salvia is homosporous

C. Horsetails are gymnosperms

D. Stems are usually unbranched in both

Cycas

Answer: A



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10. Which one is wrongly matched?

A. Uniflagellate gametes - Polysiphonia

B. Biflagellate zoospores - Brown algae

C. Gemma cups - Marchantia

D. Unicellular organism - Chlorella

Answer: A



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11. Winged pollen grains are present in

A. Mustard

B. Cycas

C. Mango

D. Pinus

Answer: D



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12. Double fertilisation is exhibited by

A. Gymnosperms

B. Algae

C. Fungi

D. Angiosperms

Answer: D



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13. Select the mismatch:

A. Pinus - Dioecious

B. Cycas - Dioecious

C. Salvinia - Heterosporous

D. Equisetum - Homosporous

Answer: A



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14. Life cycle of Ectocarpus and Fucus respectively are

A. Haplontic, Diplontic

B. Diplontic, Haplodiplontic

C. Haplo-diplontic, Diplontic

D. Haplo-diplontic, Haplontic

Answer: C



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15. Zygotic meiosis is characteristic of

A. Marchantia

B. Fucus

C. Funaria

D. Chlamydomonas

Answer: D



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16. An example of colonial alga is

A. Chlorella

B. Volvox

C. Ulothrix

D. Spirogyra

Answer: B



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17. Identify and select the wrong statement out of the following:

A. In conifers the needle like leaves are well adapted to extremes of temperature, moisture conservation and onslaught of wind

B. Roots of pines enter into a symbiotic relationship with higher fungi

C. The coralloid roots in *Cycas* have
nitrogen fixing cyanobacteria

D. The giant redwood tree *Sequoia*, one of
the tallest trees in an angiosperm.

Answer: D



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18. What is not true for an angiospermic
embryo sac?

- A. One male gamete is discharged into it during fertilisation
- B. It is present within an ovule
- C. It represents female gametophyte
- D. Its formation is preceded by meiosis

Answer: A



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19. Which one of the following statements is wrong?

A. Agar-agar is obtained from *Gelidium* and

Gracilaria

B. *Laminaria* and *Sargassum* are used as

food

C. Algae increase the level of dissolved

oxygen in the immediate environment

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

Answer: D



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

A. Thick cuticle

B. Presence of vessels

C. Broad hardy leaves

D. Superficial stomata

Answer: A



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21. Select the correct statement

A. Gymnosperms are both homosporous
and heterosporous

B. *Salvinia*, *Ginkgo* and *Pinus* all are gymnosperms

C. *Sequoia* is one of the tallest trees

D. The leaves of gymnosperms are not well adapted to extremes of climate

Answer: C



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22. Which one is wrong statement?

A. Mucor has biflagellate zoospores

B. Haploid endosperm is typical feature of gymnosperms

C. Brown algae have chlorophyll a and c and fucoxanthin

D. Archegonia are found in Bryophyta, Pteridophyta and Gymnosperms.

Answer: A



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23. Male gametes are flagellated in

A. Eetocarpus

B. Spirogyra

C. Polysiphonia

D. Anabaena

Answer: A



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24. 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. Four

B. One

C. Two

D. Three

Answer: D



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25. Besides paddy fields, cyanobacteria are also found inside vegetative part of:

A. Psilotum

B. Pinus

C. Cycas

D. Equisetum

Answer: C



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26. Isogamous condition with non-flagellated gametes is found in

A. Fucus

B. Chlamydomonas

C. Spirogyra

D. Volvox

Answer: C



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27. Select the wrong statement

A. Chlamydomonas exhibits both isogamy and anisogamy and Fucus shows oogamy

B. Isogametes are similar in structure, function and behaviour

C. Anisogametes differ either in structure, function or behaviour

D. In oogamous reproduction, female gamete is smaller and motile, while male gamete is larger and non motile

Answer: D



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28. Which one of the following pairs is wrongly matched?

A. Ginkgo - Archegonia

B. Salvinia - Prothallus

C. Viroids - RNA

D. Mustard - Synergids

Answer: A



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29. 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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30. Cycas and Adiantum resemble each other in having

- A. Vessels
- B. Seeds
- C. Motile Sperms
- D. Cambium

Answer: C



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31. Which one of the following is a correct statement?

A. Origin of seed habit can be traced in
pteridophytes

B. Pteridophyte gametophyte has a
protonemal and leafy stage

C. In gymnosperms, female gametophyte is
free-living

D. Antheridiophores and archegoniophores
are present in pteridophytes

Answer: A



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32. 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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33. 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. Statements (B) and (C)

B. Statements (A) and (B)

C. Statements (A) and (C)

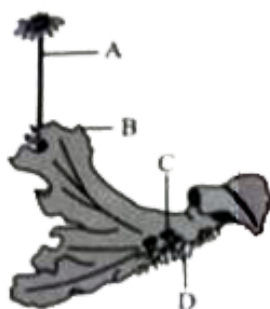
D. Statements (A) and (D)

Answer: D



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34. Examine the figure given below and select the right option giving all the four parts (A, B, C, D) correctly identifications



	A	B	C	D
a.	Seta	Sporophyte	Protoneurium	Elm
b.	Antheridiophore	Male thallus	Globose	Hexagon
c.	Archegoniophore	Female thallus	Gemma cup	Winged
d.	Archegoniophore	Female thallus	Bud	3-4



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35. 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 lacks archegonia

Answer: B



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36. 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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