



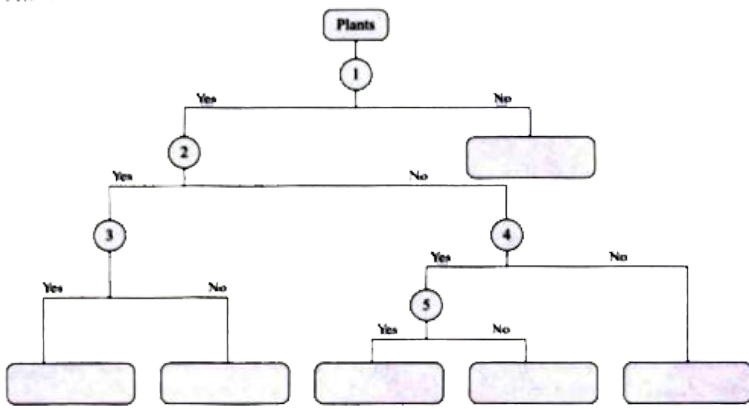
BIOLOGY

BOOKS - CENGAGE BIOLOGY

CLASSIFICATION OF PLANTS

Mandatory Exercise Exercise Set I

1. Fill the flowchart by answering the questions given below:



(1) Does it have chlorophyll?

(2) Does it reproduce by seeds?

(3) Does it have flowers?

(4) Does it have roots?

(5) Does it have a stem?



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2. Use the given key terms in the box to fill in the puzzle. You will not use all the terms.

chitin conidiophore haustoria

hypha sporangium mycelium

Sac or case where spores are produced _____



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3. Use the given key terms in the box to fill in the puzzle. You will not use all the terms.

chitin conidiophore haustoria

hypha sporangium mycelium

Complex carbohydrate found in the cell walls
of fungi_____



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4. Use the given key terms in the box to fill in
the puzzle. You will not use all the terms.

chitin conidiophore haustoria

hypha sporangium mycelium

Hyphae that grow into host cells without killing them_____



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5. Use the given key terms in the box to fill in the puzzle. You will not use all the terms.

chitin conidiophore haustoria

hypha sporangium mycelium

Network of filaments_____



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6. Use the given key terms in the box to fill in the puzzle. You will not use all the terms.

chitin conidiophore haustoria

hypha sporangium mycelium

Basic structural unit of fungi_____



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7. The accumulated food reserve in fungi is

A. protein

B. starch

C. glycogen

D. fat

Answer: C



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8. Write the difference between the following:

Colonial and filamentous algae



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9. Write the difference between the following:

Plasmogamy and karyogamy



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10. Write the difference between the following:

Fragmentation and budding



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11. This question consists of two statements each: assertion (A) and reason (R). To answer this question, mark the correct alternative as directed below.

Assertion: Algae belonging to different divisions contain similar photosynthetic pigments.

Reason: Algae of different divisions live in similar habitats.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: D



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12. How do lichens react to pollution?



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13. Why are lichens called dual plants?



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14. Use the idea map and answer the following:

Bryophytes

- * Plants that do not have vascular tissue to transport food and water

- * Plants that are small and must live in moist habitats

Mosses

- * Have main stem and small, thin leaf-like appendages
- * Grow in carpet-like tufts
- * Help prevent erosion

Liverworts

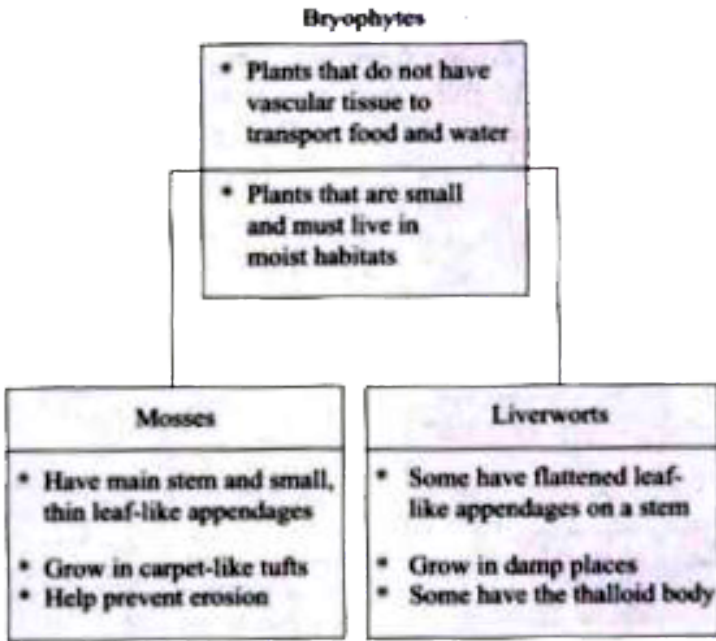
- * Some have flattened leaf-like appendages on a stem
- * Grow in damp places
- * Some have the thalloid body

How are bryophytes different from other types of plants?



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15. Use the idea map and answer the following:



How are mosses helpful to other living organisms in the environment?



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16. The life cycle of non-vascular plants includes alternation of generations between the following:

A. A diploid sporophyte and a diploid gametophyte

B. A haploid sporophyte and a haploid gametophyte

C. A diploid sporophyte and a haploid gametophyte

D. A haploid sporophyte and a diploid gametophyte

Answer: C



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17. Write the economic importance for each of the following:

Nephrolepis



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18. Write the economic importance for each of the following:

Sphagnum moss



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Mandatory Exercise Exercise Set II

1. Look at leaf venation and write the appropriate term in the space given below:

Monocots



Dicots



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2. Write the other differences between monocots and dicots



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3. Complete the following using the key terms given below:

anther ovary petal

fruit stamen micropyle

Flower parts that are usually brightly coloured and leaf-like _____



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4. Complete the following using the key terms given below:

anther ovary petal

fruit stamen micropyle

A tiny opening in the ovule through which pollen tubes enter_____



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5. Complete the following using the key terms given below:

anther ovary petal

fruit stamen micropyle

A ripened ovary containing one or more seeds_____



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6. Complete the following using the key terms given below:

anther ovary petal

fruit stamen micropyle

The female reproductive organ formed at the lower end of the pistil_____



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7. Complete the following using the key terms given below:

anther ovary petal

fruit stamen micropyle

Consists of an anther and a filament _____



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8. Complete the following using the key terms given below:

anther ovary petal

fruit stamen micropyle

The male reproductive structure that contains pollen grains _____



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9. Name the following:

Spore-producing leaves of pteridophytes



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10. Name the following:

Group of plants which produce seeds but not fruits



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11. Name the following:

The botanical name of 'peat moss'



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12. Name the following:

Group of plants having multicellular sex organs surrounded by a sterile jacket.



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13. Name the floral whorls of flowers and their constituent units with a neat labelled diagram.



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14. You examine a 1 inch tall plant you collected in the woods. This plant was the part of a several square feet mass of similar small plants. It is very flexible and does not easily stand upright by itself. Upon examining the tiny flat leaf-like structures of this plant, you see no veins. There is no evidence of seeds, but at the end of a little stalk on the end of the plant, there is some sort of spore-bearing structure. Which of the following groups does the above plant likely to belong?

A. Angiosperm

B. Gymnosperm

C. Fern

D. Bryophyte

Answer: D



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15. Match the columns A and B.

Column A	Column B
i. Marchantia	A. Single cotyledon
ii. Penicillium	B. Two cotyledons
iii. Rhizopus	C. Gemmae cup
iv. Mycorrhiza	D. Blue green mould
v. Single cell protein	E. Bread mould
vi. Chlorella	F. Fungi and roots of higher plant
vii. Spirogyra	G. Spirulina
viii. Wine industry	H. Space food
ix. Monocot	I. Spiral chloroplast
x. Dicot	J. Saccharomyces
xi. Air pollution indicator	k. Male horse and female donkey
xii. Water pollution indicator	L. Lichen
xiii. Plant animal	M. E. coli
xiv. Methane producing bacteria	N. Euglena
xv. Hinny	O. Methanogens



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Mandatory Exercise Assertion And Reason

1. Assertion: Bryophytes are the amphibians of plant kingdom.

Reason: They are found in swamps and the areas where water and land meet.

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: C



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2. Assertion: The bryophytes are also known as vascular cryptogams.

Reason: Pteridophytes are non vascular plants.

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: D



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3. Assertion: Endosperm is haploid in Gymnosperm.

Reason: In Cycas, stem is usually branched

- A. If both A and R are true, and R is the correct explanation of A
- B. If both A and R are true, but R is not the correct explanation of A
- C. If A is true but R is false
- D. If both A and R are false

Answer: B



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4. Assertion: The seeds of Gymnosperms are naked.

Reason: Gymnosperm is a type of phanerogams.

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: B



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5. Assertion: Budding occurs in yeast.

Reason: It is similar to fission process of bacteria.

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: C



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6. Assertion: It is easy to grow fungi in the laboratory.

Reason: Fungi shows fragmentation.

- A. If both A and R are true, and R is the correct explanation of A
- B. If both A and R are true, but R is not the correct explanation of A
- C. If A is true but R is false
- D. If both A and R are false

Answer: B



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7. Assertion: Euglena is an obligatory phototroph.

Reason: Euglena lacks nuclear membrane

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: D



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8. Assertion: Autotrophic bacteria obtain their carbon from inorganic carbon.

Reason: Plants that obtain their energy from sunlight are called autotrophs.

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: B



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9. Assertion: Eubacteria and Archaeobacteria have same outer cell wall structure.

Reason: They both lack peptidoglycan in their cell wall

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: C



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10. Assertion: Prions are proteinaceous infectious particles.

Reason: Prions possess no nucleic acid.

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: A



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11. Assertion: Virus possess only a portion of the properties of organisms.

Reason: Virus are simpler than bacteria

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: B



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12. Assertion: Two kingdom system was proposed by Linnaeus.

Reason: This includes plant kingdom and animal kingdom.

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: C



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13. Assertion: Thallophyta include algae and fungi.

Reason: Thallophyta plants are thallus.

A. If both A and R are true, and R is the correct explanation of A

B. If both A and R are true, but R is not the correct explanation of A

C. If A is true but R is false

D. If both A and R are false

Answer: A



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Mandatory Exercise Fill In The Blanks

1. Common fungi used in preparing the bread is



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2. In fungus _____ cell organelles are absent



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3. Fungi and roots of higher plant forming symbiotic association is called _____



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4. Cell wall of algae is made up of. _ _ _



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5. Female sex organ of pteridophytes is _____



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6. Male sex organ of Bryophyte is _____



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7. Moss possesses _____ sex organ.



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8. _____ is storage product of Euglena.



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9. _____ is a flagellated spore.



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10. Phanerogams include ___ and _____



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11. Cryptogams consist _____, _____ and _____.



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Consolidated Exercise

1. Give reasons for the following:

Bryophytes are called amphibians of the plant kingdom.



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2. Give reasons for the following:

Algae are photo autotrophic in nature.



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3. Give reasons for the following:

Sphagnum is used as bandages in wounds.



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4. Give reasons for the following:

Angiosperms are dominant on earth's surface



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5. Give reasons for the following:

Pteridophytes are also called vascular cryptogams.



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6. Read the conditions carefully and write the answers to the questions:

Conditions: A green plant is found growing in the hills of the western Himalayas which shows the following characteristics:

(i) The nuclei of the main plant body have haploid chromosome numbers.

(ii) The main plant body possesses rhizoids.

(iii) The zygote develops into a new plant body which is dependent on the main plant body.

This new plant body is a sporophyte.

(iv) The sporophyte has foot, seta, and capsule.

(a) Based on these information, identify the plant from the following options:

A. The plant is an alga.

B. The plant is a bryophyte.

C. The plant is a pteridophyte.

D. The plant is a gymnosperm.

Answer: D



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7. Read the conditions carefully and write the answers to the questions:

Conditions: A green plant is found growing in the hills of the western Himalayas which shows the following characteristics:

(i) The nuclei of the main plant body have

haploid chromosome numbers.

(ii) The main plant body possesses rhizoids.

(iii) The zygote develops into a new plant body which is dependent on the main plant body.

This new plant body is a sporophyte.

(iv) The sporophyte has foot, seta, and capsule.

Name the cells where reduction division (meiosis) takes place in the life cycle of the plant. Where are these cells located?



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8. Read the conditions carefully and write the answers to the questions:

Conditions: A green plant is found growing in the hills of the western Himalayas which shows the following characteristics:

(i) The nuclei of the main plant body have haploid chromosome numbers.

(ii) The main plant body possesses rhizoids.

(iii) The zygote develops into a new plant body which is dependent on the main plant body.

This new plant body is a sporophyte.

(iv) The sporophyte has foot, seta, and capsule.

Based on the characteristics of the plant which of the following is most correct statement about the group to which it belongs:

A. Plants do not possess flowers.

B. Plants do not possess xylem and phloem.

C. Plants are called amphibians of the plant kingdom.

D. Plants possess roots.

Answer: D



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9. Match with more than one correct answer.

Column I	Column II
(a) <i>Dryopteris</i>	(i) Vascular cryptogam
(b) <i>Cycas</i>	(ii) Moss
(c) <i>Spirogyra</i>	(iii) Oak fern
(d) <i>Selaginella</i>	(iv) Pond scum
(e) <i>Sphagnum</i>	(v) Sago palm
	(vi) Used in liver ailment
	(vii) Male fern
	(viii) Pond silk

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10. Draw a diagram to describe the life cycle of a fern. What are the uses of ferns?



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Consolidated Exercise Multiple Choice Questions

1. Endosperm in gymnosperm is

A. n

B. $2n$

C. $3n$

D. $4n$

Answer: A



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2. Pteridophytes differ from bryophytes in having

- A. Archegonium
- B. Vascular bundle
- C. Motile antherozoids
- D. Alternation of generation

Answer: B



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3. The plant in which root, stem and leaves are undifferentiated is called

A. Thallus

B. Flower

C. Parthenocarpy

D. None of these

Answer: A



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4. Male sex organs of bryophytes are

- A. Antheridium
- B. Archegonium
- C. Stamen
- D. Carpel

Answer: A



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5. Female sex organs of pteridophytes are

A. Carpel

B. Stamen

C. Archegonium

D. Antheridium

Answer: C



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6. First well developed terrestrial plant is

- A. Bryophytes
- B. Pteridophytes
- C. Algae
- D. Gymnosperms

Answer: B



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7. In red algae, food is stored in the form of

A. Floridian starch

B. Mannitol

C. Laminarin

D. Glycogen

Answer: A



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8. Which of the following is a brown algae ?

A. Sargassum

B. Volvox

C. Ulothrix

D. Chara

Answer: A



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

A. Spirogyra

B. Dictyota

C. Chiarella

D. Ulva

Answer: C



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10. The association of fungi with the roots of higher plants is called

A. Lichens

B. Mycorrhiza

C. Slime mould

D. Neurospora

Answer: B



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11. Winged seeds are found in

A. Cycas

B. Pinus

C. Pteris

D. Selaginella

Answer: B



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12. The member of which group are commonly known as amphibians of plant kingdom

A. Algae

B. Bryophyta

C. Gymnosperm

D. Angiosperm

Answer: B



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13. The branch of biology dealing with the study of fungi is known as

A. Phycology

B. Mycology

C. Genetics

D. Virology

Answer: B



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14. Air pollution indicator is

A. Mycorrhiza

B. Algae

C. Fungi

D. Lichen

Answer: D



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15. The only group of seedless tracheophytes is

- A. Bryophyta
- B. Gymnosperm
- C. Pteridophytes
- D. Algae

Answer: C



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16. In which group, would you place a plant which has ovules completely enclosed by ovary wall, well developed flowers and fruit?

A. Bryophyta

B. Pteridophyta

C. Gymnosperms

D. Angiosperm

Answer: D



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17. Bordeaux mixture is a

A. Fungicide

B. Herbicide

C. Bacteriocide

D. None of these

Answer: A



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18. Give an example of unicellular fungi.

A. Yeast

B. Penicillium

C. Rhizopus

D. Alternaria

Answer: A



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19. The accumulated food reserve in algae is

A. Protein

B. Starch

C. Glycogen

D. Fat

Answer: B



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20. Naked seeded plants are called

A. Bryophyte

B. Angiosperm

C. Gymnosperm

D. Algae

Answer: C



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21. The type of plants having flowers and seeds is called

A. Angiosperm

B. Gymnosperm

C. Bryophyte

D. None of these

Answer: A



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22. Angiosperms differ from gymnosperms in having

A. Sieve tube

B. Vessels

C. Fruits

D. All of the above

Answer: D



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23. Sepal is the unit of

A. Corolla

B. Calyx

C. Androecium

D. Gynoecium

Answer: B



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24. Female sex organ of an angiospermic plant is

A. Sepal

B. Petal

C. Stamen

D. Carpel

Answer: D



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25. Male sex organ of an angiospermic plant is

A. Sepal

B. Petal

C. Stamen

D. Carpel

Answer: C



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26. Sago is obtained from

A. *Cycas circinalis*

B. *Pinus*

C. *Gnetum*

D. *Sequoia*

Answer: A



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27. Which of the following is a Christmas tree?

A. Cycas

B. Pinus

C. Ginkgo

D. Gnetum

Answer: B



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28. Which is an edible fungi?

A. Penicillium

B. Rhizopus

C. Agaricus

D. Synchytrium

Answer: C



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29. The smallest gymnosperm is

A. pinus

B. zamia pygmia

C. ginkgo

D. cedrus

Answer: B



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30. Which of the following group of plants is called vascular cryptogams ?

A. Pteridophytes

B. Bryophytes

C. Thallophyta

D. Angiosperms

Answer: A



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31. Which species are commonly known as Reindeer moss?

A. Cladonia

B. Graphis

C. Rhizocarpon

D. All of these

Answer: A



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32. Who is rightly called the founder of mycology?

A. Fritsch

B. Mitcheli

C. Mendel

D. de Bary

Answer: B



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33. Moni brought a free floating bright green silky mass from the fresh water pond. He observed it under a microscope. The plant may be

A. Spirogyra

B. Sargassum

C. Sporangium

D. Rhizopus

Answer: A



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34. Study of bryophytes is called

A. Bryology

B. Phycology

C. Mycology

D. Algology

Answer: A



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35. Agar-agar is obtained from

A. Gelidium and Gracilaria

B. Polysiphonia

C. Porphyra

D. Chara

Answer: A



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36. The water surface will masses of algae called be covered by bubbling masses of algae called

A. Water blooms

B. Sargasso sea

C. Red tide

D. All of these

Answer: A



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37. The animals do not graze on ferns because most of ferns contain a phenolic derivative called

- A. Phlobaphene
- B. Fuschin solution
- C. TNT
- D. All of these

Answer: A



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38. A plant that manufactures its own food is

A. Autotroph

B. Parasite

C. Epiphyte

D. Saprophyte

Answer: A



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39. At the centre, pyrenoid consists of

A. Fat

B. Starch

C. Protein

D. Enzyme

Answer: C



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40. Yeast is employed for the production of

A. Curd

B. Cheese

C. Acetic acid

D. Ethyl alcohol

Answer: D



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41. Algal fungi are placed in

A. Ascomycetes

B. Phycomycetes

C. Basidiomycetes

D. Deuteromycetes

Answer: B



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42. Fungi are always

A. autotrophs

B. heterotrophs

C. parasites

D. saprotrophs

Answer: B



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43. A living fossil is

A. Pinus

B. Ephedra

C. Cedrus

D. Cycas

Answer: D



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44. In angiosperms

A. Xylem possesses vessels

B. Phloem has sieve tubes and companion cells

C. Flowers are reproductive structure

D. All of the above

Answer: D



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45. Plant's body in thallus is

A. Gymnosperms

B. Algae

C. Bryophyta

D. Pteridophyta

Answer: B



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46. Maiden Hair Fern is

A. Pteris

B. Adiantum

C. Marsilea

D. Dryopteris

Answer: B



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47. A pteridophyte having pyrenoid in its chloroplasts is

A. Selaginella

B. Marsilea

C. Peridium

D. Equisetum

Answer: A



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48. Ephedrine is got from the plant part of Ephedra

A. Flowers

B. Leaves

C. Stems

D. Roots

Answer: C



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49. Non flowering plants are called

A. Dicot

B. Monocot

C. Phanerogams

D. Cryptogams

Answer: D



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50. Bryophytes are

A. Seedless vascular plants

B. Seedless non-vascular plant

C. Amphibians of plant kingdom

D. Both (B) and (C)

Answer: B



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51. Red tide is caused due to

A. Dinoflagellate

B. Diatom

C. BGA

D. Red algae

Answer: A



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52. Flagellated spore is called

A. zoospore

B. aplanospore

C. hypnospore

D. oospore

Answer: A



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53. Peat Moss is

A. Sphagnum

B. Funaria

C. Riccia

D. Lycopodium

Answer: A



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54. Spike moss is

A. Selaginella

B. Sphagnum

C. Funaria

D. Bryopsida

Answer: A



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55. A true moss is that -

A. Selaginella

B. Bryopsida

C. Riccia

D. Selaginella

Answer: B



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56. Naked seeds are present in

A. Pinus

B. Mango

C. Mustard

D. Lemon

Answer: A



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57. The body of organisms has chitinous cell wall and is made up of hyphae and mycelium

A. Spirogyra

B. Rhizopus

C. Funaria

D. Riccia

Answer: B



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58. The algal partner of a lichen is called

A. Mycobiont

B. Phycobiont

C. Both A and B

D. None of these

Answer: B



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59. Sex organs are unicellular and non-jacketed
in

A. Algae

B. Bryophytes

C. Pteridophytes

D. Gymnosperms

Answer: A



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60. Which of these pairs is mismatched ?

A. Anther - produces microspores

B. Carpel - produces pollen

C. Ovule-becomes fruit

D. Ovary- becomes seed

Answer: A::B::D



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61. Which of these is/are found in seed plants?

A. Complex vascular tissue

B. Pollen grains are flagellated

C. Retention of the female gametophyte
within the ovule

D. Roots, stems, and leaves

Answer: A::C::D



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62. Monocotyledonous plants often have

A. parallel venation

B. flower parts in units of four or five

C. dorsiventral leaves

D. cambium absent

Answer: A::C::D



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63. Which of the following do not have true roots?

A. Conifers

B. Ferns

C. Grasses

D. Mosses

Answer: D



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64. Mosses are characterised by which of the following?

A. A dominant gametophyte with a dependent sporophyte

B. A dominant gametophyte with an independent sporophyte

C. A dominant sporophyte with an independent gametophyte

D. A dominant sporophyte with a large dependent gametophyte

Answer: A



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65. Which of the following is the correct sequence during alternation of generation in a flowering plant?

A. Sporophyte → meiosis →

gametophyte →

gametes to → fertilisation → diploid

zygote

B. Sporophyte → mitosis →

gametophyte →

meiosis → sporophyte

C. Haploid gametophyte → gametes →

meiosis → fertilisation → diploid

sporophyte

D. Sporophyte → spores → meiosis

→ gametophyte → gametes

Answer: A



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1. You are shown a slide of longitudinal section of male cone of Pinus. You can observe

- A. megaspores filled inside the sporangia
- B. seeds attached to megasporophylls
- C. winged pollen grains in microsporangia
- D. boat-shaped microspores

Answer: C



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2. Which bacterium is capable of utilising the most abundantly available gas in the atmosphere for one of their metabolic pathways, but cannot utilise the second most abundantly available gas for another metabolic pathway?

A. Pseudomonas

B. Clostridium

C. Rhodospirillum rubrum

D. Xanthomonas

Answer: B



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3. One of the most important divisions under the Kingdom Plantae, gymnosperms are believed to be originated 265 million years ago and flourished in the year in which dinosaurs were predominant. Which era is this?

A. Palaeozoic era

B. Cenozoic era

C. Mesozoic era

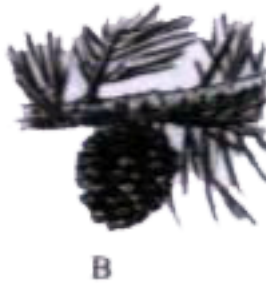
D. Crustaceous period

Answer: C



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4. Which of the reproductive structures in the below pictures is pollinated by wind?



A. A only

B. B only

C. Both A and B

D. Neither A nor B

Answer: C



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5. Match the correct pair from column A and column B.

Column A	Column B
(i) Covered seed	(a) Gymnosperm
(ii) <i>Pinus</i>	(b) Angiosperm
(iii) <i>Cladophora</i>	(c) Bryophyta
(iv) <i>Marchantia</i>	(d) Thallophyta

A. (i)-(b), (ii)-(a), (iii)-(d), (iv)-(c)

B. (i)-(a), (ii)-(b), (iii)-(c), (iv)-(d)

C. (i)-(c), (ii)-(a), (iii)-(d), (iv)-(b)

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

Answer: A



6. Lichen is usually cited as an example of symbiosis in plants where an algal and fungal species live together for their mutual benefit.

Which of the following will happen if algal and fungal partners are separated from each other?

A. Both will survive and grow normally and independent from each other.

B. Both will die.

C. Algal component will survive while the fungal component will die.

D. Fungal component will survive while the algal component will die.

Answer: C



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7. A group of PUC students are appearing for a biology practical examination. One of the practical problems is to identify the slide

focused under a microscope. When they observe, they see a structure more or less spherical having an outer most layer which is green in colour and in the middle many of parenchyma cells and a number of skull-shaped bundles are arranged irregularly all around. Help them in identifying the structure properly.

A. It is the transfer section of a dicot stem.

B. It is the transfer section of a monocot root.

C. It is the transfer section of a di cot leaf.

D. It is the transfer section of a monocot stem.

Answer: D



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8. A plant shows rhizoids and is haploid. It needs water to complete its lifecycle because the male gametes are motile. Identify the group to which it belongs.

A. Pteridophyte

B. Gymnosperm

C. Monocot

D. Bryophytes

Answer: D



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9. What happens to the spore after it ejects from sporophytes in pteridophyte plants?

- A. It germinates to become a prothallus
- B. It germinates to become another spore forming a fern plant
- C. It joins with another spore to become a seedling.
- D. It encysts and devours by snail-like organisms.

Answer: A



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10. Assertion: We cannot classify polytrichum under tracheophytes.

Reason: Because polytrichum belong to the division pteridophyte and they do not possess vascular tissue. Tracheophytes are vasculaturebearing plants.

A. Both the assertion and the reason are true and the reason is the correct explanation of the assertion.

B. Both the assertion and the reason are true and the reason is the not the correct explanation of the assertion.

C. Both the assertion and the reason are false

D. Assertion is false but the reason is true.

Answer: C



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Challenging Exercise

1. Compare and contrast the fern gametophyte and sporophyte.



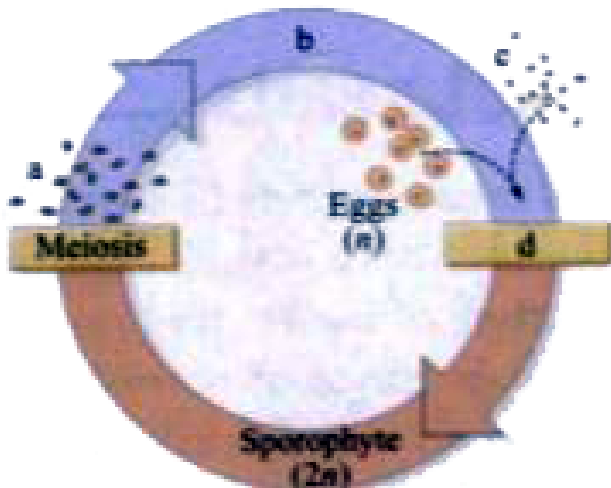
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2. A botanist discovers a new species of plant in a tropical rain forest. After observing its anatomy and life cycle, the following characteristics are noted: flagellated sperm, xylem with tracheids, separate gametophyte,

and sporophyte generations with the sporophyte dominant and no seeds. Which group of plants is most closely related to this?

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3. Refer to the diagram to fill in the blanks in the sentences that follow:



A sporophyte produces by meiosis. A spore undergoes mitosis becoming _____. Eggs and combine during _____ forming a zygote. The zygote grows by mitosis, forming a new sporophyte.



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4. What is the difference between bryophytes and tracheophytes?



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Questions

1. What are the bases for the classification of algae?



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2. Why the bryophytes usually grow luxuriently during the rainy season near the regular supply of water ?



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3. What are the three kinds of vascular plants?



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4. Which group of plants are sometimes called vascular plants and why are they so called?



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5. Name the group of plants which produce seeds but not fruits.



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