



# BIOLOGY

## BOOKS - MBD

### Plant Kingdom

#### Example

1. Who first gave the classification of plant kingdom?



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2. Name two subkingdoms of plant kingdom.



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3. Name the main groups of cryptogamme.



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4. Write one example each of

red algae



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**5. Write one example each of  
brown algae**



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**6. Write one example each of  
green algae**



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7. Which is the dominant phase in the life cycle of bryophytes?



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8. Name the four classes of pteridophytes.



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9. What is the special feature of gymnosperms?





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**10. What are cones?**



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**11. What kind of fertilization occur in angiosperms?**



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**12.** What is heterospory? Write its significance.



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**13.** Give reason for the following

Sexual reproduction is of oogamous type in bryophytes.



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**14.** Give reason for the following

In algae and fungi, plant body is thallus.



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**15.** Give reason for the following

In red algae and blue green algae biliproteins are present.



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**16.** Give reason for the following

Cell wall of red algae protects from drying or freezing on their exposure to air.



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**17.** Give reason for the following

Male sex organs are called antheridia and female sex organs are called archegonia in Bryophytes.



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**18.** Give reason for the following

Chlamydomonas is motile.



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**19.** Name the male and female sex-organs in Funaria what type of sexual reproduction occurs in bryophytes.



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20. What is type of food reserve in brown algae?



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21. What is isogamy?



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22. How are pteridophytes similar to bryophytes?



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23. Why are green algae look green?



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24. Name the structure from which protonema develop in liverworts.



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**25.** Give reason for the following

Seeds are enclosed by fruit wall or pericarp.



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**26.** Give reason for the following

Leaves in ferns are large, compound and of megaphyllous type.



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**27.** Give reason for the following

In Brassica, seeds are formed but it is not placed in gymnosperms.



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**28.** Give reason for the following

Life cycle is diplontic in angiosperms.



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**29.** Give reason for the following

Double fertilization is present in angiosperms.



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**30.** Write the names of groups which show diplontic life cycle and having diploid sporophyte dominant phase.



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**31.** Give reason for the following

In angiosperms, one of the male gametes fuses with egg to form zygote and second male gamete fuses with polar nuclei to form primary endosperm nucleus.



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**32.** How are vascular plants able to dominate the planet?



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**33.** What does syngamy and triple fusion represent?



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**34.** Name any four monocots.



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**35.** Name any four dicots.







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**36.** Name a few edible gymnosperm.



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**37.** What is resin?



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**38.** Name the plant which yield ephedrine.

Write its use.



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**39.** Name the following :

Edible brown algae



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**40.** Name the following :

Source of Iodine.



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**41.** Name the following :

Sources of alginic acid.



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**42.** What is agar?



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**43.** What are the uses of algin?



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**44.** Write examples of plants which exhibit haplontic life cycle.



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**45.** Name the dominant phase in the plant showing haplontic life cycle.



**Watch Video Solution**

**46.** Write the names of groups which show diplontic life cycle and having diploid sporophyte dominant phase.



**Watch Video Solution**

**47.** Pteridophytes demonstrate which type of life cycle pattern.



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**48.** Which angiosperm grows underground as a saprophyte?



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**49.** Give the position of sex organs in fern.



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50. Which pigment is responsible for brown colour in brown alage?



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51. Which group of plants is called vascular cryptogams?



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**52.** Name the smallest gymnosperm.



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**53.** Fill in the blanks:

The vegetative cells having cellulosic cell wall of phaeophyceae have a gelatin coating of .....



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**54.** Fill in the blanks:

Sexual reproduction may be isogamous, anisogamous or .....



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**55.** Fill in the blanks:

Rhodophytes are commonly called .....



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**56.** Fill in the blanks:

Common example of mosses are Funaria,  
..... and .....



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**57.** Fill in the blanks:

In gymnosperms the development of pollen  
grain takes place with in.....



**Watch Video Solution**

**58.** Fill in the blanks:

.....,..... and kelps are haplodiplontic.



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**59.** True or False

The sori bearing leaves of ferns are called sporophylls.



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**60.** True or False

The fern is heterosporous.



**Watch Video Solution**

**61.** True or False

The fern is heterosporous.



**Watch Video Solution**

**62. True or False**

The fern is heterosporous.



**Watch Video Solution**

**63. True or False**

Megaspore on germination produces female gametophyte.



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**64.** True or False

In *Selaginella* gametophyte is dominant generation.



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**65.** Give the technical terms used for the following:

Axis of fern leaf from which pinnae arise: also extension of petiole corresponding to midrib of entire leaf.





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**66.** Give the technical terms used for the following:

The small scaly structures covering the rhizome and petiole in ferns for preventing desiccation.



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**67.** Give the technical terms used for the following:

Any protein splitting enzyme.



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**68.** Give the technical terms used for the following:

The outermost layer of corky tissue found in woody stem.



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**69.** Give the technical terms used for the following:

Any protein splitting enzyme.



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**70.** What is the basis of classification of algae?



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71. When and where does reduction division take place in the life cycle of a liverwort, a moss, a fern, a gymnosperm and an angiosperm?



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72. Name three groups of plants that bear archegonia. Briefly describe the life cycle of any one of them.



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**73.** Mention the ploidy of the following:  
protonemal cell of a moss: primary endosperm  
nucleus in dicot, leaf cell of a moss, prothallus  
cell of a fern: gemma cell in Marchantia,  
meristem cell of monocot, ovum of a liverwort,  
and zygote of a fern.



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**74.** Write a note on economic importance of  
algae and gymnosperms.



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**75.** Both gymnosperms and angiosperms bear seeds, then why are they classified separately?



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**76.** What is heterospory? Briefly comment on its significance. Give two examples.



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**77.** Explain briefly the following terms with suitable examples: protonema



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**78.** Explain briefly the following terms with suitable examples: antheridium



**Watch Video Solution**

**79.** Explain briefly the following terms with suitable examples: archegonium



**Watch Video Solution**

**80.** Explain briefly the following terms with suitable examples: diplontic



**Watch Video Solution**

**81.** Explain briefly the following terms with suitable examples: sporophyll



**Watch Video Solution**

**82.** Explain briefly the following terms with suitable examples: isogamy



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**83.** Differentiate between the following: red algae and brown algae



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**84.** Differentiate between the following liverworts and moss



**Watch Video Solution**



**85.** Differentiate between the following

homosporous and heterosporous  
pteridophytes



**Watch Video Solution**

**86.** Differentiate between the following

syngamy and triple fusion.



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**87.** How would you distinguish monocots and dicots on the basis of three main characters?



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**88.** Match the following column I with Column

II

**Column I**

- (a) *Chlamydomonas*
- (b) *Cycas*
- (c) *Selaginella*
- (d) *Sphagnum*

**Column II**

- (i) Moss
- (ii) Pteridophyte
- (iii) Algae
- (iv) Gymnosperm.



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**89.** Write the general characters, classification and examples gymnoperms.



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**90.** Food is stored as Floridean starch in Rhodophyceae. Mannitol is the reserve food material of which group of algae?



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**91.** Give an example

Haplontic life cycle.



**Watch Video Solution**

**92.** Give an example

Diplontic life cycle



**Watch Video Solution**

**93.** Give an example

Haplo-diplontic life cycle.



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**94.** The plant body in higher plants is well differentiated and well developed. Roots are the organs used for the purpose of absorption. Which is the equivalent of roots in the less developed lower plants?



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**95.** Most algal genera show haplontic life style.

Name alga which is

Haplo-diplontic



**Watch Video Solution**

**96.** Most algal genera show haplontic life style.

Name alga which is

Diplontic.



**Watch Video Solution**

**97.** In bryophytes male and female sex organs are called..... and ..... .



**Watch Video Solution**

**98.** Why are bryophytes called as amphibians of plant kingdom?



**Watch Video Solution**

**99.** The male and female reproduction organs of several pteridophytes and gymnosperms are comparable to floral structures of angiosperms. Make an attempt to compare the various reproductive parts of pteridophytes and gymnosperms with reproductive structures of angiosperms.



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**100.** Heterospory i.e. formation of two types of spores - microspores and megaspores is a characteristic feature in the life cycle of a few members of pteridophytes and all spermatophytes. Do you think heterospory has some evolutionary significance in plant kingdom?



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**101.** How far does Selaginella one of the few living members of lycopodiales (pteridophytes) fall short of seed habit.



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**102.** Each plant or group of plants has some phylogenetic significance in relation to evolution. Cycas, one of the few living members of gymnosperms is called as the 'relic of past'. Can you establish a phylogenetic

relationship of Cycas with any other group of plants that justifies the above statement?



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**103.** The heterosporous pteridophytes show certain characteristic, which are precursor to the seed habit in gymnosperms. Explain.



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**104.** Comment on the life cycle and nature of a fern prothallus.



**Watch Video Solution**

**105.** How do gymnosperms and angiosperms differ from each other ?



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**106.** In which plant will you look for mycorrhiza and corolloid roots? Also explain what these terms mean.



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**107.** Gametophyte is a dominant phase in the life cycle of a bryophyte. Explain.



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**108.** With the help of a schematic diagram describe the haplo-diptonic life cycle pattern of a plant group.



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**109.** Lichen is usually cited as an example of 'symbiosis' in plants where an algal and a 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 algal partner will die.

**Answer:**



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**110.** Explain why sexual reproduction in angiosperms is said to take place through double fertilization and triple fusion. Also draw a labelled diagram of embryo sac to explain the phenomena.



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**111.** Draw labelled diagrams of

Female and male thallus of a liverwort  
(marchantia)



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**112.** Draw labelled diagrams of

Gametophyte and sporophyte of Funaria.



**Watch Video Solution**

**113.** Draw labelled diagrams of

Alternation of generation in Angiosperms.



**Watch Video Solution**

**114.** What are three kinds of vascular plants?



**Watch Video Solution**

**115.** What does the term 'angiosperms' mean?



**Watch Video Solution**

**116.** Give the scientific name of the following  
an alga with ribbon-shaped chloroplasts



**Watch Video Solution**

**117.** Give the scientific name of the following  
structure formed by the germinated fern  
spore.



**Watch Video Solution**

**118.** Give the scientific name of the following  
Megasporangium of seed plant.



**Watch Video Solution**

**119.** Why plant body of *Dryopteris* is called  
sporophyte?



**Watch Video Solution**

**120.** How many cotyledons are present in Pinus embryo?



**Watch Video Solution**

**121.** What is the genetic constitution of endosperm in angiosperms?



**Watch Video Solution**

**122.** What is the advantage of fruit habit in angiospermic plant?



**Watch Video Solution**

**123.** Give technical terms for each of the following:

The fusion product of all the contents of two gametangia



**Watch Video Solution**

**124.** Give technical terms for each of the following:

The megasporangium of gymnosperms and sngiosperms



**Watch Video Solution**

**125.** Give technical terms for each of the following:

The sorus of an angiosperm which produces microspores



**Watch Video Solution**

**126.** Give technical terms for each of the following:

Non-vascular amphibians of the plant kingdom



**Watch Video Solution**

**127.** Give technical terms for each of the following:

A mature fertilized ovary.



**Watch Video Solution**



**128.** What are rhizoids?



**Watch Video Solution**

**129.** Which term is used for spore bearing leaves?



**Watch Video Solution**

**130.** Name a plant possessing poly-cotyledonous and endospermic seed.



**Watch Video Solution**

**131.** Which part of ovule is haploid in gymnosperms?



**Watch Video Solution**

**132.** Which angiosperm grows underground as a saprophyte?



**Watch Video Solution**

**133.** To which group *Araucaria* belongs?



**Watch Video Solution**

**134.** List a few general characters of plant kingdom.



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**135.** What is the site of origin of multicellular plant life?



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**136.** Distinguish between Cryptogamae and Phanerogamae.



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**137.** List the distinguishing features of algae.



**Watch Video Solution**

**138.** List six main features of red algae.



**Watch Video Solution**

**139.** Name some parasitic and epiphytic algae.



**Watch Video Solution**

**140.** Make a diagrammatic sketch of life cycle of a red algal plant.



**Watch Video Solution**

**141.** Write a note on Brown algae.



**Watch Video Solution**

**142.** Give a brief account of economic importance of brown algae.





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**143.** Draw well labelled diagram of cell structure of chlamydomonas, ulothrix and spirogyra.



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**144.** Describe various forms of asexual reproduction in algae.



[Watch Video Solution](#)

**145.** How do the red algae prepare their food?



**Watch Video Solution**

**146.** Differentiate Sporophyte and gametophyte.



**Watch Video Solution**

**147.** Explain what is alternation of generation.



**Watch Video Solution**



**148.** Why are mosses found in humid and moist area?



**Watch Video Solution**

**149.** Write typical features of bryophytes.



**Watch Video Solution**

**150.** In how many groups bryophytes are classified? Name them.



**Watch Video Solution**

**151.** Draw a labelled sketch of life cycle of moss.



**Watch Video Solution**

**152.** Enumerate the features of the tracheophytes.



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**153.** List a few characters responsible for survival of vascular plants.



[Watch Video Solution](#)

**154.** Classify the tracheophytes into subdivisions.



[Watch Video Solution](#)

**155.** List six important features of pteridophytes.



**Watch Video Solution**

**156.** Differentiate prothallus and thallus.



**Watch Video Solution**

**157.** Give graphic life cycle of a fern.



**Watch Video Solution**

**158.** What is heterospory? Write its significance.



**Watch Video Solution**

**159.** Write short note on club moss.



**Watch Video Solution**

**160.** Write short note on Sphenopsida.





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**161.** Write classification and examples of tracheophyta.



[Watch Video Solution](#)

**162.** Write a note on Sporophyll.



[Watch Video Solution](#)

**163.** Which of the gymnosperms and angiosperms are ancient?



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**164.** Why are conifers successful in the colder zones of the north?



**Watch Video Solution**

**165.** What characters of seed plants make them specially adapted to life on land ?



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**166.** What are annual, biennial and perennial plants? Give example of each group.



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**167.** What kind of life cycle pattern is shown by bryophytes and pteridophytes?



**Watch Video Solution**

**168.** Write the comparative account of important divisions of plants.



**Watch Video Solution**

**169.** Give differences between bryophyta and tracheophyta.



**Watch Video Solution**

**170.** Write the characters of angiosperms.



**Watch Video Solution**

**171.** Show the differences between sexual organs of gymnosperms and angiosperm with

diagrams only.



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**172.** Graphic outline chart of classification of plant kingdom. Give examples.



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**173.** How red algae can remain alive in deep sea?



**Watch Video Solution**

**174.** Why is the plant body of an alga called a thallus? Name any two unicellular green algae which are placed in the plant kingdom instead of the Kingdom- Protista.



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**175.** Why the stem-like and leaf -like structures of a moss plant are not called stem and leaves?



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**176.** Explain why gymnosperms fail to produce fruits?



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**177.** Explain why only ferns are often first plants to appear after a forest fire?



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## Exercise

1. Write examples of plants which exhibit haplontic life cycle.



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2. Give an example

Haplo-diplontic life cycle.



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3. In bryophytes male and female sex organs are called..... and .....



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4. Give any two examples of ferns.



**Watch Video Solution**

5. Where do mosses grow?



**Watch Video Solution**

6. What are rhizoids?



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7. Why are bryophytes called as amphibians of plant kingdom?



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8. In how many groups bryophytes are classified? Name them.





[Watch Video Solution](#)

9. Write two features of brown algae. Give examples.



[Watch Video Solution](#)

10. Comment on the life cycle and nature of a fern prothallus.



[Watch Video Solution](#)

**11.** Distinguish between Cryptogamae and Phanerogamae.



**Watch Video Solution**

**12.** List six important features of pteridophytes.



**Watch Video Solution**

**13.** Explain gymnosperm plants are more advanced than fern plants.



**Watch Video Solution**

**14.** Explain why sexual reproduction in angiosperms is said to take place through double fertilization and triple fusion. Also draw a labelled diagram of embryo sac to explain the phenomena.



**Watch Video Solution**

**15.** Write a note on economic importance of algae and gymnosperms.



**Watch Video Solution**