

Question Bank
F. Y. B. Sc. Botany
Plant Diversity [BOT1101]

Objective questions :

1. Pyrenoid is found in one of the following organelles of *Spirogyra*
a. nucleolus b. vacuole c. mitochondria d. chloroplast
2. Which one of the following statements about *Spirogyra* is true?
a. asexual reproduction occurs by zoospores
b. filaments showing scalariform conjugation are homothallic
c. filaments showing lateral conjugation are homothallic
d. filaments showing lateral conjugation are heterothallic
3. Which one of the following is placed in prokaryote
a. Cyanophyceae b. Chlorophyceae c. Phaeophyceae d. Rhodophyceae
4. Which one is commonly known as 'pond silk'?
a. *Ulothrix* b. *Spirogyra* c. *Chara* d. *Batrachospermum*
5. Agar-agar is obtained from :
a. *Sargassum* b. *Chara* c. *Chlorella* d. *Gracilaria*
6. In *Sargassum*, conceptacles occur :
a. on the stem b. on the leaf c. in the receptacles d. in the basal region
7. Scalariform conjugation takes place in :
a. *Chlamydomonas* b. *Zygnema* c. *Spirulina* d. *Oscillatoria*
8. All fungi are :
a. symbionts b. parasites c. saprophytes d. heterotrophs
9. Penicillin was discovered by :
a. A. F. Blackeslee b. Alexander Flemming c. de Barry d. C. B. Huggins
10. Litmus is a natural dye obtained from :
a. algae b. fungi c. lichens d. none of the above
11. Which one of the following fungi is used in baking of bread?
a. *Rhizopus stolonifer* b. *Penicillium notatum*
c. *Saccharomyces cerevisiae* d. *Alternaria solani*
12. Inverted omega-shaped ring of vascular bundles are found in :
a. rachis of *Cycas* b. leaflet of *Cycas* c. root of *Cycas* d. needle of *Pinus*
13. Which of the following gymnosperm possesses winged pollen grains?
a. *Cycas* b. *Pinus* c. *Ephedra* d. *Gnetum*
14. ----- is known as amphibians of plant kingdom.
a. Algae b. Fungi c. Lichen d. Bryophyte
15. ----- is known as maiden hair fern.
a. *Nephrolepis* b. *Adiantum* c. *Equisetum* d. *Marsilea*

One sentence questions :

1. What is the function of air bladder in *Sargassum* ?
2. What is fragmentation?
3. Name some products of industrial importance obtained from algae.
4. Name the pigments present in green algae.
5. Name an alga where we find prokaryotic cell organization.
6. Give the habit and habitat of *Sargassum*.
7. What is a receptacle?
8. Name the algae which are used as food.
9. Name the algae which are used as fodder.
10. Name an alga which is the source of agar-agar.
11. Name the group of algae which is considered beneficial for soil fertility.
12. What is heterotrophy?
13. What is autotroph?
14. What is mycelium?
15. What is mycorrhiza?
16. What are lichens?
17. Define mycobiont.
18. Define phycobiont.
19. Define symbiotic association.
20. Give the scientific name of a species of fungus which causes a plant disease.
21. Name a fungus species which is edible.
22. Name a fungus species which is a source of antibiotic.
23. Give the scientific term for the symbiotic association of a fungus with the roots of higher plant.
24. Name the causal organism of wheat rust.
25. What is saprophyte?
26. What is parasite?
27. By what type of division does a spore mother cell give rise to spores.
28. Arrange the following cells in the archegonium of bryophytes from base to apex : neck canal cells, cover cells, venter canal cell, egg cell
29. Mention two hydrophytic features of *Equisetum*.
30. What are lichens ?
31. Define fungi.
32. What are cryptogams ?
33. What are phanerogams ?

Short notes :

1. Algae as biofertilizer.
2. Vegetative structure of *Rhizopus*
3. Asexual reproduction in *Rhizopus*
4. Sexual reproduction in *Rhizopus*
5. Economic importance of fungi
6. Application of fungi in industries
7. Fungi as food
8. Fungi in medicine
9. Fungi as pathogen

10. Sporophyte of *Adiantum*
11. Microsporophyll of *Cycas*
12. Male cone of *Pinus*
13. L. S. of female cone of *Pinus*
14. T. S. of ovule in *Cycas*
15. L. S. of *Cycas* leaflet
16. T. S. of *Cycas* root
17. T. S. of *Cycas* stem
18. Crustose lichen
19. Foliose lichen
20. Fruiticose lichen
21. Internal structure of root of *Adiantum*
22. Internal structure of rhizome in *Adiantum*
23. Sporophyte in *Adiantum*

Short answer questions :

1. What are the criteria used in the classification of algae?
2. Describe external thallus structure of *Sargassum*.
3. Describe internal thallus structure of *Sargassum*.
4. Write the systematic position of *Sargassum*.
5. Enumerate important characteristics of fungi.
6. Describe in brief methods of sexual reproduction in fungi.
7. Describe the form and structure of lichens.
8. Write in brief economic importance of lichens.
9. Describe rhizoids in Bryophytes and give their function.
10. Give systematic position of *Riccia*.
11. Write systematic position of *Adiantum*.
12. Draw well labeled diagrams of :
 1. T. S. of the internode of aerial shoot of *Equisetum*
 2. T. S. of the node of aerial shoot of *Equisetum*
 3. T. S. of rhizome of *Equisetum*
 4. L. S. of the strobilus of *Equisetum*
 5. Write a note on prothallus of *Equisetum*.
13. Draw well labeled diagrams of :
 1. T. S. of normal young root of *Cycas*
 2. T. S. of coralloid root of *Cycas*
 3. T. S. of young stem of *Cycas*
 4. T. S. of old stem of *Cycas*
 5. T. S. of rachis of *Cycas*
 6. V. S. of leaflet of *Cycas*
 7. L. S. of male cone of *Cycas*
 8. T. S. of normal young root of *Cycas*
 9. L. S. of ovule of *Cycas*
 10. L. S. of seed in *Cycas*
 11. Megasporophyll of *Cycas*
 12. Thallus of *Riccia*
 13. Sporophyte of *Riccia*
 14. Sex organs of *Riccia*

15. T. S. of thallus of *Riccia*

Long answer questions :

1. Describe the characteristic feature of the different classes of algae as proposed by Chapman and Chapman.
2. Give an outline of Chapman and Chapman system of classification of algae.
3. List the main divisions of algae and mention the diagnostic features of each division.
14. Give an illustrated account of the reproductive structures of *Sargassum*.
15. Describe sexual reproduction in *Sargassum*.
16. Write a note on economic importance of algae.
17. Give an outline of the classification of fungi as proposed by Ainsworth.
18. With the help of suitable diagrams describe the life cycle of *Rhizopus*.
19. With the help of labeled diagrams illustrate the life cycle of *Puccinia graminis*.
20. Which part of the life cycle of *Puccinia graminis* occurs on wheat? Describe with the help of diagrams.
21. Which part of the life cycle of *Puccinia graminis* occurs on barberry plants? Describe with the help of diagrams.
22. With the help of suitable diagrams describe the structure of the gametophyte of *Funaria*.
23. Give an illustrated account of the sporophyte of *Funaria*.
24. Describe the structure of sporophyte of *Equisetum* with the help of suitable diagrams.
25. Describe various xerophytic and hydrophytic features of the sporophyte of *Equisetum*.
26. Describe the salient features of Angiosperms.
27. Explain the causes of evolutionary success of Angiosperms.
28. Give comparative account of dicotyledons and monocotyledons.
29. Describe habit, habitat and external morphology of *Cycas*.
30. Give an account on structure of male cone and megasporophyll of *Cycas*.
31. Explain the general characters of Bryophytes.
32. Give an account of sexual reproduction in *Riccia*.
33. Describe the structure of antheridium and archegonium of *Riccia*.
34. Explain the internal organisation of thallus of *Riccia*.
35. Explain the life cycle of *Riccia*.
36. Explain external thallus structure of *Riccia*.
37. Enlist the general characters of Lichens.
38. Give economic importance of lichens.
39. Give the general characters of fungi.
40. Give the general characters of algae.
41. Explain external morphology of sporophyte of *Adiantum*.
