



**B.Sc. BOTANY**  
**First Semester**  
**LOWER PLANT DIVERSITY**  
**BSB – 106 (MAJOR)**

**Duration: 3Hrs.**

**Full Marks: 70**

Part-A (Objective) =20  
Part-B (Descriptive) =50

**(PART-B: Descriptive)**

**Duration: 2 hrs. 40 mins.**

**Marks: 50**

**Answer any four from Question no. 2 to 8**  
**Question no. 1 is compulsory.**

1. Describe the life history of Ectocarpus with diagrams. (10)
2. Write short notes on: (5×2=10)
  - A. Vegetative reproduction in Chara.
  - B. Sexual Reproduction in Diatoms.
3. Write a note on the economic importance of fungi in Industry and agriculture. (10)
4. What do you understand by Clamp connection? Explain. (3+7=10)
5. Describe the sexual reproduction of lichen with proper diagram. (10)
6. Discuss the economic importance of lichen. (10)
7. Define Virus. Write a note on living and non living characteristics of virus. (2+8=10)
8. Write a note on ultra structure of Bacteria. (10)

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**Duration: 20 minutes**

**Marks – 20**

**(PART A - Objective Type)**

**I. Choose the correct answer:**

**1×20=20**

1. The fungal partner of lichen is called mycobiont whereas the algal partner is called
  - a. Glycobiont
  - b. Algobiont
  - c. Phycobiont
  - d. Often referred as algal partner
2. Lichens are ecologically important because
  - a. They are associations of algae and fungi.
  - b. They can grow greatly in polluted areas
  - c. They are symbiotic with higher plants.
  - d. They are pioneers of vegetation.
3. Which of the lichen live as a crust over soil, rocks and branches of trees?
  - a. Foliose
  - b. Fruticose
  - c. Filamentous
  - d. Crustose
4. The major group of algae involved in lichen formation is
  - a. Red algae
  - b. Brown algae
  - c. Blue green algae
  - d. All
5. In lichens the sexual reproduction is carried out by
  - a. Only algae
  - b. Only fungi
  - c. Both algae and fungi
  - d. Sexual reproduction is absent in lichen
6. The special pigment in Cyanophyceae which gives blue colour to the plant is
  - a. Phycoerythrin
  - b. Phycocyanin
  - c. Fucoxanthin
  - d. Xanthophylls
7. The cystocarp is found in
  - a. Chlorophyceae
  - b. Xanthophyceae
  - c. Phaeophyceae
  - d. Rhodophyceae
8. Algae attached to the mud is called
  - a. epizoic
  - b. epilithic
  - c. epipellic
  - d. endophytic

9. A volvox colony consisting of a definite number of cells arranged in a specific manner and forming an integrated whole is called as  
 a. volvox colony      b. Oogonia  
 c. coenobium          d. none of the above
10. Navicula is a  
 a. Pinnate diatom      b. centric diatom  
 c. both                    d. none
11. Amylum stars are found in  
 a. *Pinnularia*          b. *Cladophora*  
 c. *Chara*                d. *Volvox*
12. In the life cycle of *Cladophora*, there is regular alternation of the spore producing diploid filaments (asexual generation) with the gamete. Producing haploid filaments (sexual generation). The phenomenon is called as  
 a. alternations of generations      b. diploid filament  
 c. haploid filament                    d. zygote
13. 'Bakers Yeast' is  
 a. *Mucor*                b. *Saccharomyces*  
 c. *Aspergillus*        d. *Agaricus*
14. The food material in fungi is stored in the form of  
 a. Glucose                b. Sucrose  
 c. Starch                 d. Glycogen
15. Study of Fungi is known as  
 a. Mycology              b. Phycology  
 c. Cryptogams          d. Phenerogams
16. Fungi resemble human beings in having  
 a. heterotrophic mode of nutrition      b. nature of food reserve  
 c. mode of respiration                    d. all of these
17. Gram +ve bacteria contains more  
 a. lipid                    b. peptidoglycan  
 c. cellulose                d. none
18. Virus contains  
 a. DNA                    b. RNA  
 c. Both DNA and RNA      d. Either DNA or RNA
19. Ribosomes of prokaryotes is  
 a. 70s                    b. 80s                    c. 50s                    d. 40s
20. Metabolically inert virus is present in  
 a. Extracellular form      b. Intracellular form  
 c. Both                    d. none

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