

B. Sc. DEGREE EXAMINATION, NOVEMBER 2017
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIRST SEMESTER

COURSE : MAJOR – CORE
PAPER : ALGAE, FUNGI AND LICHENS
TIME : 3 HOURS
MAX.MARKS:100

SECTION – A (36 marks)

ANSWER ALL QUESTIONS:

I. CHOOSE THE CORRECT ANSWER: (5 x 1=5 marks)

- Plaque stage is seen
a) Volvox b) Nostoc c) Sargassum d) Polysiphonia
- Fucoxanthin pigment is present in
a) green algae b) bluegreen algae c) brownalgae d) red algae
- Black wart disease of potato is caused by
a) *Nostoc* b) *Albugo* c) *Cercopora* d) *Synchytrium*
- Cruciform division is seen in the cells of
a) *Plasmodiophora* b) *Peziza* c) *Puccinia* d) *Polysiphonia*
- Litmus is a dye prepared from
a) Lichen b) Algae c) Fungi d) Plasmodium

II. FILL IN THE BLANKS (5 x 1=5 marks)

- The reserve food _____ starch is present in Rhodophycophyta.
- Usnea is an example of _____ lichen.
- _____ fungus grows on dung, rotting wood and in humus soil.
- Chytrids are _____ cellular thallus.
- The conceptacle and the receptacle are seen in _____.

III. STATE WHETHER THE FOLLOWING ARE TRUE OR FALSE: (4 x 1=4 marks)

- Plasmodiophora* causes white rust disease in plants.
- Soredia and isidia are completely absent in lichens.
- Cladophora* has both haploid and diploid kinds of filaments.
- Sexual reproduction is absent in Cyanophyceae.

IV. MATCH THE FOLLOWING : (4 x 1 = 4 marks)

- | | | |
|--------------|---|----------------|
| 15. Stigma | - | Symbiosis |
| 16. Akinetes | - | Eyespot |
| 17. Pyrenoid | - | Resting spores |
| 18. Lichen | - | Starch plates |

V. ANSWER ANY SIX WITHIN 50 WORDS EACH:**(6 x 3 = 18 marks)**

19. Agar Agar
20. Coenobium
21. Aegagropila
22. Cyphellae
23. Dikaryophase
24. Plasmodium
25. Carpogonium
26. Saprophyte
27. Apothecia

SECTION – B**ANSWER ANY FOUR QUESTIONS IN NOT MORE THAN 200 WORDS EACH. DRAW DIAGRAMS WHEREVER NECESSARY:****(4 x 6 = 24 marks)**

28. Write down the salient features of Cyanochloronta.
29. Describe the vegetative method of reproduction in *Chara*.
30. Write down the signs and symptoms caused by *Albugo candida* on land plants & explain the fine structure of the haustoria produced by *Albugo*.
31. Explain how *Cercospora* affects the Groundnut plants.
32. Describe the 3 types of lichen thalli.
33. Mention the economic uses of lichens.

SECTION – C**ANSWER ANY TWO QUESTIONS IN NOT MORE THAN 1000 WORDS EACH. DRAW DIAGRAMS WHEREVER NECESSARY.****(2 x 20 = 40 marks)**

34. Describe the reproduction that takes place in *Puccinia graminis*.
35. Write about the fungus *Synchytrium*. How does it affect the *Solanum* plants. Explain its life cycle and how to control the spread of the disease caused by *Synchytrium*.
36. Write down the classification of algae as put forward by Bold & Wynne.
37. Explain the salient features of the genus *Caulerpa*. Also describe its thallus structure and about the vegetative and sexual reproduction.
