

B. Sc. DEGREE EXAMINATION, NOVEMBER 2018
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)

- Which of the following has the ability to fix atmospheric nitrogen?
a) Red algae b) Blue green algae c) Brown algae d) Chlorella
- Sexual reproduction in *Volvox* is
a) Isogamous b) Anisogamous c) Oogamous d) Physiological anisogamous
- Which of the following is an acrophilous fungus?
a) *Peziza* b) *Cercospora* c) *Puccinia* d) *Albugo*
- Teleutospores are
a) 2 celled b) 3 celled c) 4 celled d) 1 celled
- Lichens are good indicators of
a) Air pollution b) Water pollution c) Soil pollution d) all three

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

- All unicellular algae have one photosynthetic pigment in common, it is-----.
- The species of *Nostoc* occurring in the coralloid roots of *Cycas* is -----.
- Dolipore septum is a characteristic feature of-----.
- Lichens growing on rocks are called-----.
- Globule of *Chara* is made of -----number of shield cells.

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

- The cells of the class Chlorophyceae are typically eukaryotic.
- The tetrasporophyte in *Polysiphonia* develop from carpospores.
- Plasmogamy refers to the fusion of two compatible nuclei.
- Only the algal components of lichens reproduce sexually.

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

- Alginic Acid - *Albugo*
- Plaque stage - Lichens
- White rust - *Volvox*
- Litmus - Brownalgae

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

19. Prokaryotic cell
20. Siphonaceous thallus.
21. Fungi imperfecti
22. Tikka disease of groundnut
23. Symbiosis
24. Ecological significance of lichens.
25. Any 3 important features of the class Chytridiomycetes.
26. Internal structure of lichen thallus.
27. Any 2 morphological variations in *Caulerpa* thallus.

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 diagnostic features of the class Phaeophyceae and Myxophyceae.
29. Write notes on a) globule b) amyllum star.
30. Describe the sexual reproduction in *Albugo*.
31. Explain the various types of lichen thalli.
32. Discuss the sexual reproduction in *Peziza*.
33. Describe the symptoms and control measures of the disease caused by *Cercospora*.

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

34. Outline the classification of algae as proposed by Bold and Wynne.
35. Discuss the conceptacles of *Sargassum* with neat labelled diagrams.
36. Describe the life cycle of *Puccinia*.
37. Write an essay on the economic importance of lichens.
