

2017

BOTANY

[**Honours**]

(CBCS)

[**First Semester**]

PAPER - CIT

Full Marks : 40

Time : 2 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Answer any five of the following : 2×5

(a) State the pigment systems of Cyanophyta and Rhodophyta.

(b) What is triphasic life cycle ?

(Turn Over)

- (c) Contrast the chemotroph and lithotroph.
- (d) What is spheroplast ?
- (e) What are prions ? Give example of a disease caused by them.
- (f) Why the members of *Chara* are called 'stonewort' ? What is phialopore ?
- (g) What are the cystocarp and gonimoblast filaments ?
- (h) Differentiate archaeobacteria and eubacteria.
2. Answer any *four* of the following : 5 × 4
- (a) Give a brief account of the range of thallus organization in algae. 5
- (b) Discuss the algal classification system as proposed by Lee. 5
- (c) Discuss lysogenic cycle of viruses. 5
- (d) Explain mechanism of conjugation as found in bacteria. 5

- (e) Characterize plant viruses with special reference to TMV. Enumerate the differences between the virus and a cellular organism. 4 + 1
- (f) Where do the species of *Chara* occur ? Describe the structure of nucule and glabule. 1 + 2 + 2
3. Answer any *one* question : 10 × 1
- (a) Write down the role of bacteria in agriculture. Draw and explain the cell wall structure of a Gram negative bacteria. 5 + 5
- (b) What is isomorphic alternation of generation ? Give an account of the salient features of Phaeophyta. With proper label and diagram describe the thallus structure of *Coleochaete*. 1 + 4 + 5