

2017

Total Pages—3 B.Sc.-CBCS/IS/BOT/H/C1T/17

2017

BOTANY

[Honours]

(CBCS)

[First Semester]

PAPER – C1T

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 archaebacteria and eubacteria.

2. Answer any *four* of the following : 5 x 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

(3)

(c) Characterize plant viruses with special reference to TMV. Enumerate the differences between the virus and a cellular organism. 4 + 1

(d) 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

2018

Total Pages—3

C/18/BSc/1st Sem/BOTH/C1T

2018

CBCS

1st Semester

BOTANY

PAPER—C1T

(Honours)

Full Marks : 40

Time : 2 Hours

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Phycology and Microbiology

Answer all question

1. Answer any five questions : 5×2

(a) What is Palmella stage?

(b) What is meant by spheroplast?

(Turn Over)

(c) Differentiate between trichome and filament.

~~(d)~~ What is Gaiducov Phenomenon?

(e) Distinguish between macrandrous and nannandrous species of *Oedogonium* with example.

~~(f)~~ What is meant by gongrosira stage?

~~(g)~~ Define Mesosome and Carboxysome.

~~(h)~~ Differentiate pili from flagella.

2. Answer any four questions : 4×5

~~(a)~~ Draw and describe the detailed structure of TMV. 5

(b) Write an essay on the conjugation of bacteria. 5

~~(c)~~ Mention the photosynthetic pigments of Cyanophycean algae. What is suffultory cell? 5

~~(d)~~ Describe with sketches the male and female reproductive structures of *Chara* sp. 2½+2½

~~(e)~~ Distinguish between carpogonium, carpo-sporangium and tetrasporangium of *Polysiphonia*. 5

~~(f)~~ Describe the development of male and female reproductive structure of *Vaucheria*. *6* ~~5~~ 5

3. Answer any one question : 1×10

(a) Differentiate the cell wall between a gm^{+ve} and gm^{-ve} bacteria. Write a short note on economic importance of bacteria. Compare archaeobacteria with eubacteria. 4 + 3 + 3

~~(b)~~ What do you mean by isomorphic alternation of generation? Describe the asexual reproduction of *Ectocarpus*. Name one epiphytic, endophytic and epizoic species of *Ectocarpus*. 2 + 5 + 3

2019

Total Page - 3

UG/1st Sem/BOT(H)/T/19

2019

B.Sc.

1st Semester Examination

BOTANY (Honours)

Paper - C 1-T

(Phycology and Microbiology)

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full 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 questions : $2 \times 5 = 10$
- (a) Define transduction in bacteria. Comment on its basic mechanism.
 - (b) What are passive diffusion and facilitated diffusion in microbial nutrition?
 - (c) Characterize the classes of viroids.
 - (d) What is heterocyst?

[Turn Over]

(2)

(e) Mention two unique features of *Coleochaete*.

(f) Name a coenocytic algae and comment on its reproduction.

(g) What is oral vaccine? Give example.

(h) Name a coenobium algae and characterize it morphologically.

2. Answer any four questions : $5 \times 4 = 20$

(a) Give a brief account of the structure of T-phage.

(b) Characterize mycoplasma. Write on their pathogenicity. $3+2$

(c) Write in detail about transformation mechanism of Gram-negative bacteria.

(d) Highlight the prokaryotic characteristics of Cyanophycean algal members and describe the components and their arrangement inside the cell. $2+3$

(e) Describe the lysogenic cycle.

(f) Comment on the evolutionary significance of *Prochloron* with reference to its features and possible related members.

(3)

3. Answer any *one* questions : $10 \times 1 = 10$

(a) What are prions? Briefly state the biochemical characteristics of prions responsible for its pathogenicity. Write a note on prion diseases of human beings. How can prions be decontaminated? $1+3+4+2$

(b) Write a comprehensive note on the morphological features of *Chara*. Describe its reproduction. $5+5$
