

Total No. of Printed Pages—3

**1 SEM TDC BOTH (CBCS) C 1**

**2 0 2 4**

( November )

**BOTANY**

( Core )

Paper : C-1

**( Microbiology and Phycology )**

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. (a) Choose the correct answer of the following : 1×3=3

(i) The thallus of *Volvox* is called as—coenocyte / coenobium/ colony / filament.

(ii) Phycocyanin is the characteristic pigment of—Myxophyceae / Chlorophyceae / Xanthophyceae / Phaeophyceae.

( 2 )

(iii) The algae *Chara* is called 'stonewort' because its plant body is encrusted with—calcium oxalate / calcium bicarbonate/ calcium carbonate/ calcium chloride.

(b) Fill in the blanks of the following :  $1 \times 2 = 2$

(i) Genetic recombination in bacteria mediated by a virus is known as \_\_\_\_\_.

(ii) Bacterium having only one flagellum at its one pole is called \_\_\_\_\_.

2. Write short notes on any *three* of the following :  $4 \times 3 = 12$

(a) Role of blue-green algae in rice cultivation

(b) Sex organs of *Chara*

(c) Characteristic features of Archaeobacteria

(d) DNA viruses

3. What are the criteria based on which algae are classified? Give a brief account of the classification of algae suggested by Fritsch.

$3 + 9 = 12$



( 3 )

Or

Write explanatory notes on the following :

6+6=12

(a) Asexual reproduction of *Chlamydomonas*

(b) Cystocarp of *Polysiphonia*

4. Describe the characteristics of *Mycoplasma*. How are they different from bacteria and viruses? Mention some of the diseases caused by PPLO (Pleuropneumonia-like organisms).

4+4+4=12

Or

What do you mean by genetic recombination? Give an account of conjugation in bacteria.

3+9=12

5. How are viruses classified? Discuss the Baltimore's system of classification of viruses.

3+9=12

Or

Write explanatory notes on the following :

6+6=12

(a) Lytic cycle of bacteriophage

(b) Role of virus in vaccine production

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