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

**2021**

( Held in January/February, 2022 )

**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) The principal pigment in Phaeophyceae is phycoerythrin / fucoxanthin / xanthophyll / phycocyanin.
  - (iii) Fertilization in Chlamydomonas is mesogamous / anisogamous / oogamous / isogamous.

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

(i) Many bacteria bear minute hairy structures on their cell wall, these are called \_\_\_\_\_.

(ii) Conjugation of bacteria was discovered by \_\_\_\_\_.

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

(a) Role of algae in agriculture

(b) Evolutionary significance of Prochloron

(c) Role of bacteria in industry

(d) Role of virus in vaccine production

3. Give a detailed account of the range of thallus structure in algae with suitable diagrams.  $8 + 4 = 12$

Or

What is meant by 'alternation of generation'? Explain it with reference to the life history of Polysiphonia. How are the spores dispersed in this plant?  $2 + 8 + 2 = 12$

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

Answer/Write explanatory note on the following :  $6 \times 2 = 12$

(a) "Bacteria are both good and bad associates of human civilization." Justify the statement.

(b) Phases of bacterial growth curve

5. What are viruses? Are they living or non-living agents? Write about the methods of their transmission and the control measures of a typical plant viral disease.  $1 + 3 + 4 + 4 = 12$

Or

What are viroids and prions? How are they different from a typical virus? Draw and describe the structure of tobacco mosaic virus.  $2 + 2 + 2 + 2 + 4 = 12$

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