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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 : 1×2=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*) : 4×3=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

(*Continued*)

Or

Answer/Write explanatory note on the following : 6×2=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

★ ★ ★