Total No. of Printed Pages—3

1 SEM TDC BOTH (CBCS) C 1

2021

(March)

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) Cap cell is a characteristic feature of *Volvox / Oedogonium / Chara / Nostoc*.

(ii) The storage product of *Rhodophyceae* is starch and oil / cellulose / floridean starch / glycogen.

(iii) The life cycle of *Chlamydomonas* is diplontic / haplontic / haplo-diplontic / diplo-haplontic.

(b) Fill in the blanks of the following : 1×2=2

(i) The specific time interval between one binary fission to the next binary fission is called _____.

(ii) Pasteurization was discovered by _____.

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

(a) Coenobium of *Volvox*

(b) Asexual reproduction of algae

(c) The role of bacteria in agriculture

(d) Economic importance of 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

Or

Write notes on the following : 6+6=12

(a) Male and female reproductive structure of *Chara*

(b) Structure of unilocular and plurilocular sporangia of *Ectocarpus*

4. What is genetic recombination? Describe with diagram the mechanism of conjugation in bacteria. 3+3+6=12

Or

Write notes on the following : 6+6=12

(a) Characteristic features of bacteria

(b) Nutritional types of bacteria

5. What is capsomere? Discuss the physio-chemical nature of viruses. Give an example of plant virus with diagram. 2+6+4=12

Or

Write notes on the following : 4×3=12

(a) Insect transmission of viruses

(b) Function of prions

(c) Morphology of viruses

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