TDC (CBCS) Odd Semester Exam., 2022

BOTANY

(Honours)

(1st Semester)

Course No. : BOTHCC-101T

(Phycology and Microbiology)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

UNIT—I

1. Answer any *two* of the following questions : 2×2=4

(a) Write a note on contributions of Louis Pasteur.

(b) What are photoautotrophs and chemoautotrophs?

(c) What do you mean by microbial metabolism?

2. Answer any *one* of the following questions : 6

   (a) Describe the factors that affect microbial growth.

   (b) Discuss the role of bacteria in agriculture and in production of antibiotics.

UNIT—II

3. Answer any *two* of the following questions : 2×2=4

   (a) What are capsid and capsomere?

   (b) Write a note on structure of TMV.

   (c) State the important functions of Prion.

4. Answer any *one* of the following questions : 6

   (a) Write in detail the Baltimore's system of classification of viruses.

   (b) Discuss the physico-chemical nature of virus.

UNIT—III

5. Answer any *two* of the following questions : 2×2=4

   (a) Write a note on bacterial cell wall.

   (b) What are budding and gonidia?

   (c) Write a note on endospores.

6. Answer any *one* of the following questions : 6

   (a) What do you mean by genetic recombination? Discuss the mechanism of transformation in bacteria.

   (b) Discuss the nutritional groups of bacteria.

UNIT—IV

7. Answer any *two* of the following questions : 2×2=4

   (a) Write a note on pigments in algae.

   (b) Write the industrial uses of algae.

   (c) What are aplanospores and palmella stage?

8. Answer any *one* of the following questions : 6

   (a) Discuss the various methods of sexual reproduction in algae with suitable diagrams.

   (b) Write notes on significant contributions of F. E. Fritsch, G. M. Smith and R. N. Singh.

UNIT—V

9. Answer any *two* of the following questions : 2×2=4

(a) Write a short note on globule and nucule.

(b) What are unilocular and plurilocular sporangia?

(c) What are the reserve food materials of Phaeophyta and Rhodophyta?

10. Answer any *one* of the following questions : 6

(a) Discuss the thallus structure and asexual reproduction of *Chlamydomonas.*

(b) Give a detailed account of post-fertilization changes in *Polysiphonia* with suitable diagrams.

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