



**2020/TDC(CBCS)/ODD/SEM/
BOTHCC-101T/135**

**TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021**

BOTANY

(1st Semester)

Course No. : BOTHCC-101T

(Algae and Microbiology)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

SECTION—A

1. Answer any ten of the following questions :

2×10=20

- (a) Name the important elements required for microbial growth.
- (b) Define attenuated vaccine. Give example.



- (c) Who coined the word 'virus' and in which year?
- (d) Name some viral diseases of plant.
- (e) Mention the important characteristics of bacteria.
- (f) Draw and label the structure of a bacteriophage.
- (g) Mention the pigment system in Rhodophyceae.
- (h) What are the different types of flagella found in algae?
- (i) Mention the names of some nitrogen-fixing algae.
- (j) Point out the characteristic features of *Polysiphonia*.
- (k) What are globule and nuclei?
- (l) Write a brief note on the contribution of Fritsch.
- (m) Write a brief note on algae in industry.
- (n) What are isogamy and anisogamy?
- (o) What is Hfr strain?

- (p) Write the full form of TMV. What is its genetic material?
- (q) Write two characteristic features of archaeobacteria.
- (r) What do you mean by bacterial conjugation?
- (s) What do you mean by transduction?
- (t) Name a mycoplasmal plant disease.

SECTION—B

Answer any five questions

- 2. Discuss the role of virus in vaccine production. How does virus help in scientific research? 3+3=6
- 3. With schematic representation, give accounts of important metabolic activities of bacteria. 6
- 4. Point out the characteristic features of viroids and prions. Draw and label their structures to support your answer. 4+2=6
- 5. Write short notes on the following : 3+3=6
 - (a) Lysogenic cycle
 - (b) RNA virus



(4)

6. Write in detail the general characteristics of bacteria. What are the different types of bacteria based on nutrition? 4+2=6
7. Discuss in detail the nutritional requirement of bacteria. 6
8. Write a note on the ecological groups of algae with examples. 6
9. Furnish details on the following : 3+3=6
 - (a) Reserve food in different groups of algae
 - (b) Methods of reproduction in algae
10. Give an account of the asexual reproduction in *Ectocarpus*. 6
11. Write short notes on the following : 3+3=6
 - (a) Thallus structure of chlorophyceae
 - (b) Reproduction in cyanophyceae
