



2022/TDC/ODD/SEM/BTCHCC-302T/302

TDC (CBCS) Odd Semester Exam., 2022

BIOTECHNOLOGY

(Honours)

(3rd Semester)

Course No. : BTCHCC-302T

(General 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) Explain the importance of Bergey's manual in bacterial taxonomy.
- (b) Define microbial phylogeny.
- (c) What are the major groups of microorganisms?



(2)

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

- (a) Write the contribution of Pasteur and Robert Koch in the field of microbiology. 3+3=6
- (b) Explain briefly the structure and functions of bacterial cell wall.

UNIT—II

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

- (a) What is pure culture? Define sterilization.
- (b) Write about streak plate and spread plate method.
- (c) Discuss about maintenance of microbial culture.

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

- (a) Explain nutritional classification of bacteria with example.
- (b) What are the methods of preservation of microbes? Why is microbial preservation important? 3+3=6

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(Continued)

(3)

UNIT—III

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

- (a) What is transduction?
- (b) What are the factors that affect microbial growth?
- (c) What is amphotrophic pathway?

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

- (a) Explain synchronous batch and continuous culture.
- (b) Explain microbial growth curve. Write down all the four stages.

UNIT—IV

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

- (a) Define coliform.
- (b) Write down two water-borne diseases and the causative microorganism.
- (c) Discuss control of microorganism by chemotherapeutic agents.

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(Turn Over)



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

(a) What are the constituents of wastewater? How is wastewater treated? What are the common methods for sewage treatment? $2+2+2=6$

(b) Define control of microorganism by physical and chemical methods.

UNIT—V

9. Answer any *two* of the following questions : $2 \times 2 = 4$

(a) What causes food-borne intoxication?

(b) What is the difference between intoxication and infection?

(c) What are fermented foods? Give example.

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

(a) What causes food spoilage? Discuss briefly.

(b) Discuss the various methods of food preservation.

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