



**2023/FYUG/ODD/SEM/
BTCSEC-101T/122**

**FYUG Odd Semester Exam., 2023
(Held in 2024)**

BIOTECHNOLOGY

(1st Semester)

Course No. : BTCSEC-101T

(Microbiology)

Full Marks : 50

Pass Marks : 20

Time : 2 hours

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



CAREER STUDY
SECTION—A

The Learning App

**Answer fifteen questions, selecting any three from
each Unit :**

1×15=15

UNIT—I

- 1. Define eubacteria.**
- 2. Who discovered Gram staining?**
- 3. What is the major pigment in brown algae?**
- 4. Define fungi imperfecti.**

(2)

UNIT—II

5. Who first performed transformation experiment?
6. Define genetic recombination.
7. Define conjugation.
8. What is heterotroph?

UNIT—III

9. Define pure culture.
10. What is sterilization?
11. Name one fungal medium.
12. Name one culture medium for bacteria.

UNIT—IV

13. Define nitrogen fixation.
14. What is ammonification?
15. Name one nitrifying bacteria.
16. What is the full form of IPM?

(3)

UNIT—V

17. What is Pasteurization?

18. What is botulism?

19. Define fermentation.

20. Where is CFTRI located?

SECTION—B

Answer *five* questions, selecting *one* from each

Unit :

2×5=10

UNIT—I

21. Write the unique features of viruses.

22. Give a brief account of contribution of Louis Pasteur to the field of microbiology.

UNIT—II

23. Write a note on generation time.

24. Give a short account of microbial growth curve.

(4)

UNIT—III

25. Write a note on inoculation.
26. Give a brief account of steps of inoculation.

UNIT—IV

27. Write a note on biogeochemical cycling.
28. Give a brief account of phosphorous cycle.

UNIT—V

29. Write a note on major food-borne infections.

30. Point out the importance of fermented foods.



CAREER STUDY

The Learning App

SECTION—C

Answer *five* questions, selecting *one* from each

Unit :

5×5=25

UNIT—I

31. Give an illustrated account of major taxonomic groups of microorganisms.
32. Describe the structure of a bacterial cell with necessary diagram.

24J/561

(Continued)

(5)

UNIT--II

- 33. Describe nutritional categories of micro-organisms with suitable examples.
- 34. Give a detailed account of transduction.

UNIT--III

- 35. Give an account of the preparation of culture media.
- 36. Describe chemical methods of sterilization in detail.

UNIT--IV

- 37. Give a detailed account of biocontrol agents.
- 38. Describe the role of microbes in carbon cycle.

UNIT--V

- 39. Give an illustrated account of preservation of various types of foods.
- 40. Write an explanatory note on probiotics and their potential health benefits.

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24J—130/561