

**2025/FYUG/ODD/SEM/
BOTDSC-101T/219**

FYUG Odd Semester Exam., 2025

BOTANY

(1st Semester)

Course No. : BOTDSC-101T

(Microbiology)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

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

UNIT—I

Answer any two from the following : 2×2=4

- (a) Write a note on Nutrient Agar media.**
- (b) What is growth curve? Name the phases of growth curve.**
- (c) What is vaccine? Give example.**

Answer any one from the following : 10

- (a) Write a detailed note on production of antibiotics and their modes of action.**

- (b) Write an account on various methods of sterilization in microbiology. Differentiate prokaryotes and eukaryotes.

UNIT—II

3. Answer any two from the following :

- (a) Write a note on prions.
(b) What is mycoplasma?
(c) Write a note on TMV.

4. Answer any one from the following :

- (a) Write various methods of gene transfer in bacteria. Give detailed diagrams.
(b) Write in detail about the methods of isolation of plant viruses.

UNIT—III

5. Answer any two from the following :

- (a) What is humus?
(b) What is VAM?
(c) What is PGPB?

6. Answer any one from the following : 10

- (a) Write in detail about carbon cycle. Describe the process of carbon cycle in nature.

- (b) Write an account in detail about mechanism of biological nitrogen fixation.

UNIT—IV

7. Answer any two from the following : 2×2=4

- (a) Define food poisoning.

- (b) Define bioreactor.

- (c) What is liquid state fermentation?

8. Answer any one from the following : 10

- (a) Write in detail about different methods of food preservation.

- (b) Write in detail about batch and continuous fermentation process.

UNIT—V

9. Answer any two from the following : 2×2=4

- (a) Define BOD.

- (b) Define COD.

- (c) Name two water-borne diseases.

10. Answer any *one* from the following :

(a) Write an elaborate note on micro-organisms as indicator of water quality.

(b) Write an elaborate note on the role of microbes in sewage and domestic waste-water treatment.
