

M.Sc. (Micro) Semester - 3 (CBCS) Examination
Oct/Nov-2021 (OLD COURSE)
FERMENTATION TECHNOLOGY - 1 (CORE)

Time: 2:30 Hours

Marks: 70

Instructions:

1. All questions are compulsory.
 2. Figures to the right indicate marks.
-

Q. 1 Answer the following (any seven out of ten, each of **two** marks) **14**

1. Write about feedback control.
2. What is impeller? Enlist its application.
3. How sterilized the air? Define
4. Enlist the preservation techniques.
5. Mention the advantages and application of strain improvement.
6. What do you mean by biosensor?
7. What is GMO?
8. Describe the computer application in fermentation.
9. Define master cell bank and its advantages.
10. Give suitable examples of chemical and biological antifoam agents.

Q. 2 Answer the following (any two out of three, each of **seven** marks) **14**

1. How would you screen the industrial important microorganism? define in detail.
2. Explain molecular approaches used for strain improvement.
3. Explain the substrate used for microbial fermentation.

Q.3 Answer the following (each of **seven** marks) **14**

1. Explain continuous culture kinetics and its advantages.
2. Write a note on aerator and agitator and mention its application.

OR

Q.3 Answer the following (each of **seven** marks) **14**

1. Write note on bioreactor design for Baculo virus.
2. Explain bioreactor modification for genetically engineered organism.

Q.4 Answer the following (each of **seven** marks) **14**

1. Describe the various applications of biosensors in fermentation industries
2. Describe the various factors used for monitoring and control the bioreactor.

Q.5 Answer the following (any two out of four each of **seven** marks) **14**

1. Describer the scale up fermentation.
2. Write note on protein expression.
3. How sterilization media in fermentation reaction? explain in detail.
4. Write a note on viral safety.
