

M.Sc. (Micro) Semester - 3 (CBCS) Examination
Oct/Nov. -2019– [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. Define the terms inducer and precursor.
2. What is the stock culture?
3. What is a minimal medium?
4. Define biosensor.
5. What is directed evolution?
6. Enlist methods use for the preservation of microbes.
7. List out anti-form agents.
8. Define the term “fermentation”
9. Role of sparger in a bioreactor.
10. What is synthetic media?

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

- a. Write primary and secondary screening of industrially important microbes.
- b. What is strain improvement? Discuss in brief.
- c. Write different substrates use as the carbon source in fermentation process.

Q.3 Answer the following (a & b – both are compulsory, each of seven marks) 14

- a. Draw a line diagram of an ideal bioreactor and enlist functions of its components.
- b. What is agitation and discuss different agitator use in bioreactor.

OR

Q.3 Answer the following (a & b – both are compulsory, each of seven marks) 14

- a. What is aeration? Discuss different sparger use in a bioreactor.
- b. Write a detail note on continuous fermentation process.

Q.4 Answer the following (a & b – both are compulsory, each of 07 marks) 14

- a. What is containment categorization? Discuss.
- b. Write a short note: viral entry in biotechnologically produced products.

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

- a. Write applications computer in fermentation industries.
- b. Write the application of biosensor in fermentation industries.
- c. Write a detail note on the monitoring and control process for bioreactor.
- d. Write the role of biosensor in bioprocess monitoring.
