

M.Sc. Semester - 3 (CBCS) Examination
DEC/JAN. - 2020 [OLD COURSE]
FERMENTATION TECHNOLOGY – I (CORE)

Time: 1:30 Hours**Marks: 42****Instructions:**

1. Figure to the right indicate marks.
 2. There are five questions in the question paper.
 3. Answer any three of the following questions.
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Que-1 Answer the following (Any seven out of Ten, each of 02 marks)**[14]**

1. What do biosensors detect?
2. What is Lyophilization?
3. Differentiate batch and continuous fermentation process?
4. Differentiate master cell bank and working cell bank
5. What is scale up? Give its importance.
6. What is a recombinant product? Give example.
7. What are magnetic biosensors?
8. How would you preserve fungi?
9. How do you make glycerol stock for bacteria?
10. What are different types of molasses?

Que-2 Answer the following (each of 07 marks)(any two)**[14]**

- a. Write a note on foam in microbial processes and antifoam agents
- b. Write a note on crude nitrogen carbon sources
- c. Write a note on strain improvement.

Que-3 Answer the following (each of 07 marks) (any two)**[14]**

- a. List down types of agitators and describe any one in detail
- b. Draw a schematic diagram of an ideal fermenter and give functions of its component parts
- c. Write a note on kinetic of batch culture.

Que-4 Answer the following (each of 07 marks) (any two)**[14]**

- a. What is a heterologous system? How would you produce a protein using heterologous expression system?
- b. What is an aseptic operation? Why there is a need for containment in a fermentation process?
- c. Discuss viral safety in Biotech products.

Que-5 Answer the following (each of 07 marks) (any two)**[14]**

- a. Describe primary screening and secondary screening giving suitable example.
- b. What is a biosensor? Give its types and applications in fermentation industries.
- c. Discuss biosensors & its control.
