

B.Sc. Semester - 6 (CBCS) Examination
March/April-2024 (OLD COURSE)
BIOPROCESS TECHNOLOGY(CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

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

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- Que.1(A) Objective type questions. (04)
1. Give one example of secondary metabolite.
 2. List component parts fermentation process.
 3. Write one contribution of Sir Alexander Flemming.
 4. Mention one name of organisms used for screening.
- Que.1(B) Answer in brief (Any 1 out of 2) (03)
1. Improvement of industrially important microbes by recombinant DNA technology.
 2. Economic aspects of fermentation industry.
- Que.1(C) Write a note on (Any 1 out of 2) (07)
1. Protoplast fusion.
 2. Enlist different primary screening techniques. Explain any two of them in detail.
- Que.2(A) Objective type questions. (04)
1. Define: Pharma media.
 2. Give one examples of Chelators.
 3. Importance of Growth factors.
 4. Mention the name of agricultural waste which is preferred as raw material for making fermentation media.
- Que.2(B) Answer in brief (Any 1 out of 2) (03)
1. Fermentation media and its types.
 2. Why agricultural waste is preferred as raw material for making fermentation media?
- Que.2(C) Write a note on (Any 1 out of 2) (07)
1. Various carbon source in fermentation medium.
 2. Write note on inoculum and production medium.
- Que.3(A) Objective type questions. (04)
1. Define: fermentation.
 2. State the types of sparger.
 3. State role of baffles.
 4. Which fermenter is also known as tower fermenter?
- Que.3(B) Answer in brief (Any 1 out of 2) (03)
1. Sterilization of fermenter.
 2. Basic function of a fermenter.
- Que.3(C) Write a note on (Any 1 out of 2) (07)
1. Write detail note on Aeration and Agitation.
 2. Describe: Types of bioreactors.
- Que.4(A) Objective type questions. (04)
1. Contact dryers are used in product recovery. (True/False)
 2. Convection dryers are used in product recovery. (True/False)
 3. Difference between upstream and downstream processing.
 4. Mention one method of product recovery.

- Que.4(B) Answer in brief (Any 1 out of 2) (03)
1. Product Recovery by liquid liquid extraction.
 2. Explain: Mechanical and Non-mechanical methods.
- Que.4(C) Write a note on (Any 1 out of 2) (07)
1. Write a detail note on methods of cell separation by centrifugation.
 2. Describe various methods of cell disruption.
- Que.5(A) Objective type questions. (04)
1. Give one example of organic acid.
 2. Give example of protease producing microorganisms.
 3. Who discovered Penicillin?
 4. Economic significance of riboflavin.
- Que.5(B) Answer in brief (Any 1 out of 2) (03)
1. Production of amino acids lysine.
 2. Microorganisms, laboratory fermentation and production of amylase.
- Que.5(C) Write a note on (Any 1 out of 2) (07)
1. Production of antibiotic penicillin.
 2. Immobilization in fermentation process.
