



Seat No. _____

July - 2022

(Fermentation Technology-2019) (Theory)

Faculty Code : 003

[Total Marks : 70

- 2** (A) Objective type of questions. (1 mark each) **4**
- (1) Define term: Media.
 - (2) Enlist the any four name of minerals.
 - (3) What is role of antifoam agents in media?
 - (4) Define the term: Production medium.
- (B) Answer in brief: (any one out of two) **2**
- (1) What are molasses and Bagasse?
 - (2) Write short note on ethylene diamine teraacetic acid (EDTA).
- (C) Answer in Detail: (any one out of two) **3**
- (1) Define term: Media optimization.
 - (2) What are antifoam agents?
- (D) Write a note on: (any one out of two) **5**
- (1) Briefly discuss the process of medium formulation.
 - (2) Write short note on Inoculum Preparation procedures.
- 3** (A) Objective type of questions. (1 mark each) **4**
- (1) Name the device used for aeration in a fermenter.
 - (2) Define term: Del factor.
 - (3) What is batch fermentation?
 - (4) Define term: Sterilization.
- (B) Answer in brief: (any one out of two) **2**
- (1) Define term: Containment.
 - (2) Define term: Agitation and Aeration.
- (C) Answer in Detail: (any one out of two) **3**
- (1) Define term: Bioreactors.
 - (2) Draw and label fermenter with one multi-bladed impeller.

- (D) Write a note on: (any one out of two) 5
- (1) Briefly discuss about continuous fermentation process along with its advantages and disadvantages.
 - (2) Write short note on the mechanisms of media sterilization.
- 4 (A) Objective type of questions. (1 mark each) 4
- (1) Enlist the two methods of non-mechanical methods.
 - (2) What is flocculation?
 - (3) How the detergent can work as disruption method?
 - (4) Define term: Filtration.
- (B) Answer in brief: (any one out of two) 2
- (1) Define term: Centrifugation.
 - (2) Define term: Sedimentation.
- (C) Answer in Detail: (any one out of two) 3
- (1) Discuss in brief factors influencing the choice of filtration system.
 - (2) Short note on bioassay of fermentations products.
- (D) Write a note on: (any one out of two) 5
- (1) Briefly discuss about solvent recovery method for product recovery.
 - (2) Write about any two techniques of cell disruption.
- 5 (A) Objective type of questions. (1 mark each) 4
- (1) What is used for production of L-lysine?
 - (2) Enlist the name of microorganisms are used for amylases production by fermentation process.
 - (3) Enlist the name of microorganisms produce citric acid through fermentation.
 - (4) What type of fermentation is lysine fermentation?

- (B) Answer in brief: (any one out of two) 2
- (1) Advantages of immobilized enzymes.
 - (2) Mention the significance of yeast in ethyl alcohol production by fermentation processes.
- (C) Answer in Detail: (any one out of two) 3
- (1) Enlist various application of riboflavin production by fermentation process.
 - (2) Discuss the various factors affecting citric acid production by fermentation process.
- (D) Write a note on: (any one out of two) 5
- (1) Briefly discuss the methods for immobilization of whole cells.
 - (2) Give note on production on penicillin fermentation.
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