

B.Sc. Semester - 6 (CBCS) Examination
May/June-2021 (OLD COURSE)
BIOPROCESS TECHNOLOGY(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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- Q.1(A) Answer the following (Any one) (07)
1. Discuss in detail about recombinant DNA technology for strain improvement
 2. Explain about various range of fermentation process
- Q.1(B) Answer the following (Any one) (04)
1. Protoplast fusion: A technique use for strain development
 2. Give a note on Component part of fermentation process.
- Q.1(C) Answer the following (Any three) (03)
1. Define: fermentation
 2. Give the example of secondary metabolite
 3. Which two fermented products were developed during stage 1 before 1900?
 4. Enlist component parts of fermentor.
 5. Distinguish between primary and secondary screening.
- Q.2(A) Answer the following (Any one) (07)
1. Write a detail note on various types of nitrogen source used in media preparation
 2. Explain the process of media optimization
- Q.2(B) Answer the following (Any one) (04)
1. Media formulation
 2. Inoculum Vs production medium
- Q.2(C) Answer the following (Any three) (03)
1. Define: Growth regulator
 2. What is Buffer?
 3. What is the importance of antifoam agents during fermentation?
 4. Enlist various types of media.
 5. Give the example of Carbon sources required to prepare the fermentation media.
- Q.3(A) Answer the following (Any one) (07)
1. Batch fermentation
 2. Aseptic operation and containment.
- Q.3(B) Answer the following (Any one) (04)
1. Criteria for design of fermentor
 2. Sterilization of fermentor

- Q.3(C) Answer the following (Any three) (03)
1. Give the definition of Continuous fermentor
 2. Which method can be used in Sterilization of feed?
 3. Define: Del factor
 4. What is Impeller?
 5. What is the function of sparger in fermentor?
- Q.4(A) Answer the following (Any one) (07)
1. Discuss in detail about Centrifugation method for cell separation.
 2. Give detail on Liquid-liquid Extraction for product recovery.
- Q.4(B) Answer the following (Any one) (04)
1. Two phase aqueous extraction
 2. Cell disruption and its methods.
- Q.4(C) Answer the following (Any three) (03)
1. What is two phase aqueous system?
 2. Which product can purify by Precipitation method?
 3. Give the example of biological assay for fermented product.
 4. Define: Downstream process
 5. How sedimentation can be use in product recovery?
- Q.5(A) Answer the following (Any one) (07)
1. Give a detail on Ethyl alcohol production
 2. Discuss about synthesis and regulation of Penicillins
- Q.5(B) Answer the following (Any one) (04)
1. Production of bacterial Protease and its application
 2. L-Lysine production
- Q.5(C) Answer the following (Any three) (03)
1. What is koji process?
 2. What is riboflavin? Give its function.
 3. Define: Immobilization
 4. What is amylase? Enlist its types.
 5. Define: Antibiotic
