

2021

Microbiology

[HONOURS]

(CBCS)

(B.Sc. Fifth Semester End Examinations-2021)

PAPER-C11T

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Group-A

Answer any five from the following: 5x2= 10

1. Write two advantages of Airlift Bioreactor. 1+1
2. Why are Hops added during brewing? 2
3. Write names of suitable strain in citric acid production and penicillin production
1+1
4. What is meant by continuous fermentation? Give its application.
1+1
5. What is seed culture? 2
6. What is auxostat? 2
7. Name one microbe that is the source of vitamin B12. 2
8. Write down two characteristics of secondary metabolites. 1+1

(2)

Group-B

Answer any four from the following:

4x5 = 20

1. Differentiate between
 - a. Batch and Fed batch fermentation.
 - b. Ultra filtration and solvent extraction.
2. Describe the industrial fermentation process of the following products:
 - i) Wine
 - ii) Glutamic acid
3. Describe the significance of down stream process of industrial fermentation.
Distinguish between primary metabolite and secondary metabolite.
4. Write down the processes of Strain improvement, Explain any one.
5. Write down the properties of an ideal antifoaming agent. Write two advantages over SmF and SSF

$2\frac{1}{2} + 2\frac{1}{2}$

$2\frac{1}{2} + 2\frac{1}{2}$

3+2

3+2

3+2

Group -C

Answer any one of the following :

10x1 = 10

- 1) Write short note on the following
 - a) Corn steep liquor
 - b) Tower fermentor

5x2

(3)

- c) Solidstate fermentation
 - d) Primary Screening
 - e) Physical method of cell disruption
- 2) Mention one method of cell immobilization.

Write about its advantages and disadvantages.

Describe why up steam processing is necessary for any fermentation process. What do you mean by industrial strain improvement?

1+(2+2)+3+2
