Roll No. | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Food Technology) (Sem.–6)

FERMENTATION TECHNOLOGY

Subject Code : BTFT 323-19

M.Code : 91969

Date of Examination : 09-07-22

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a) What is meant by serial dilution?

b) Enlist any two nitrogen sources used for fermentation.

c) Which materials are used for the construction of a fermenter?

d) What is role of impeller in bioreactor?

e) Name the substrate and microorganism for the production of lysine.

f) What is fed batch fermentation?

g) Define primary metabolites. Give example.

h) What do you understand by solid state fermentation?

i) Which microorganisms and substrates used for lactic acid production?

j) What do you understand by downstream processing?

SECTION-B

2. Define fermentation. Write short note on the techniques used for the isolation and screening of industrially important microorganisms.

3. What are the raw materials, microorganisms and process parameters for the production of citric acid?

4. Describe in detail about different oriental fermented foods and the raw materials used in their production.

5. Write detailed note on packed bed reactors along with their applications.

6. Discuss briefly about the methods used in purification and recovery of metabolites from fermentation processes.

SECTION-C

7. Define fermenter. Draw a well labelled diagram of the fermenter and explain in detail the importance of its different parts.

8. Discuss in detail the fermentative production of acetone-butanol along with the microorganisms involved and well labelled flow chart indicating process steps.

9. How anaerobic methods can be useful for the treatment of food industry wastes? Also write note on the bioreactors used in the anaerobic treatment of food industry waste.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.