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

Total No. of Questions : 09

B.Sc (Bio Technology) (Sem.–5)

FERMENTATION TECHNOLOGY

Subject Code : BSBT140-18

M.Code : 78351

Date of Examination : 21-12-22

Time : 3 Hrs. **Max. Marks : 40**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying ONE mark each.**
2. **SECTION-B contains FIVE questions carrying TWO AND A HALF 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) How can we overproduce any microbial metabolite?

b) What is cell immobilization? Give its significance.

c) What is the effect of pH on enzyme kinetics?

d) What is the difference between Simple and Complex reactions?

e) What is Flocculation?

f) What is a Fermenter?

g) Which plant is commonly used for biodiesel production and why?

h) Mention an enzyme used in organic molecule synthesis.

i) Outline the products formed after steroid fermentation.

j) What is ultracentrifugation?

SECTION-B

2. What is the difference between primary and secondary metabolites? Cite a few examples of each.

3. What are the different methods for enzyme immobilization?

4. What is Michaelis Menten's equation?

5. What are biofiiels? How they are better than conventional fuel?

6. Briefly discuss

   a) Microbial flavors

   b) Microbial insecticides

SECTION-C

7. What is the difference between upstream and downstream processes in the fermentation industry? Write the different techniques used for the purification of proteins.

8. Explain the metabolic engineering of **any one** antibiotic.

9. What is Biogas? How it is produced from agricultural 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.