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Total No. of Pages : 02

Total No. of Questions : 09

M.Sc.(BT) (2011 & Onwards) (Sem.-3)

FERMENTATION TECHNOLOGY

Subject Code : MSBT-203

Paper ID : [F0262]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION 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. Answer briefly :**

- a) Solid state vs. submerged fermentation. Explain.
- b) What are amylases?
- c) How antibodies are classified?
- d) What are safety aspects of SCP?
- e) What are sparkling wines?
- f) What are applications of aspartic acid?
- g) Microbial vs. plant derived gums. Explain.
- h) What is high fructose corn syrup?
- i) Probiotics vs. prebiotics. Explain.
- j) What are nutraceuticals?

SECTION-B

2. Describe the mode of action and production technology of penicillin.
3. What are biofuels? Describe the production of biofuels from algae?
4. Describe the production and applications of glutamic acid.
5. What is fermentation economics? Describe the factors taken into consideration for determination of cost of a fermentative product.
6. What are functional foods? Describe the role of nutraceuticals as therapeutic agent.

SECTION-C

7. Describe the various steps involved in the scaling-up a bioprocess? Also highlight the problems in scaling-up a bioprocess.
8. What are single cell proteins? Describe their composition and uses. Also highlight economic parameters, constraints and factors affecting SCP production.
9. Describe the structure, properties, production, recovery and applications of pullulan.