

**Roll No.**

**Total No. of Pages : 02**

**Total No. of Questions : 11**

**M.Sc. (BT) (Sem.-3)**  
**FOOD BIOTECHNOLOGY**

**Subject Code : MBT 312**

**M.Code : 76734**

**Date of Examination : 19-12-22**

**Time : 3 Hrs.**

**Max. Marks : 70**

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **SEVEN** questions carrying **SIX** marks each and students have to attempt any **FIVE** 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) Give the use of citric acid in food.
- b) Write the principle of biosensors.
- c) Who termed “nutraceutical”?
- d) What is the limitation of protein engineering?
- e) Name a few markers in the development of functional foods.
- f) How is glucose homeostasis maintained by food-gene interaction?
- g) Write the function of P-galactosidase?
- h) What are the prospects of nutraceuticals in India? Give an example of any Indian Brand based on nutraceuticals.
- i) Give a few examples of functional foods.
- j) How does food technology help in the development of functional foods?

## SECTION-B

2. What are biosensors? Give its two applications in food processing.
3. What are functional foods? Give their importance to human health.
4. Briefly discuss the food colors and their application in the food industry.
5. Discuss the application of protein engineering in the food industry.
6. Briefly discuss the effect of an individual's diet on one's health.
7. Discuss the oilseed crops and their application in food.
8. How does different food ingredient help to improve its nutritional quality?

## SECTION C

9. What are Nutraceuticals? How are they classified? How are they different from pharmaceuticals?
10. How does nutrigenomics help in unraveling the physiological effects of complex foods?
11. Briefly discuss any two :
  - a) Nisin
  - b) Bioflavours
  - c) Biogums
  - d) Transporter gene polymorphism

**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.**