

**Roll No.**

**Total No. of Pages : 02**

**Total No. of Questions : 09**

**Master of Science (Food Technology) (Sem.-1)**

## NUTRACEUTICALS & FUNCTIONAL FOODS

**Subject Code : UC-MSFT-517-19**

**M.Code : 77277**

**Time : 3 Hrs.**

**Max. Marks : 70**

### INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** contains **SEVEN** questions carrying **TWO** marks each and students has to attempt **ALL** questions.
2. **SECTIONS-B** consists of **FOUR** Subsections : Units-I, II, III & IV. Each Subsection contains **TWO** questions each carrying **FOURTEEN** marks each and student has to attempt any **ONE** question from each Subsection.

## SECTION-A

**1. Write briefly :**

- Define Functional Food and its nutritional importance.
- Write about the health benefits of functional/nutraceutical food.
- What are different categories of nutraceutical foods?
- How functional food are classified on the basis of type?
- Which ingredients are present in cereal as functional foods?
- Write about the types of functional food extracted from spices.
- Write applications of nutraceutical and functional foods.

## SECTION-B

## UNIT-I

2.
  - a) What is chemical and biochemical nature and classification of nutraceuticals? (6)
  - b) Write about the scope of functional food in Indian market and its present status. (5)
  - c) How science of functional food and that of medicine is related? (3)
3.
  - a) Elaborate the mechanism of action of functional food. (5)

- b) What type of functional food acts as antioxidants? How this nature of food makes it a functional food? (6)
- c) Write a note on functional food markers. (3)

### UNIT-II

- 4. a) Write notes on (a) functional vegetables (b) functional cereals. (6)
- b) Which components of food grains contain functional ingredients? How these functional ingredients are made available for being used as functional food or as functional food ingredient. (8)
- 5. a) Discuss the role and scope of nutraceutical specific food for the cure of cancer, heart disease and natural stress. (8)
- b) How the functional food are being replaced or employed along with other medicines to cure/reduce the effect of chronic disease? (6)

### UNIT-III

- 6. Elaborate the properties of functional ingredients and the utilization of these natural materials as functional food/ nutraceutical food : (14)
- a) Herbs                      b) Tea                      c) Legumes
- 7. a) Name, define and elaborate the anti-oxidative characteristics of various phenolic (bioactive) compounds. (7)
- b) Elaborate various dietary fibers and other carbohydrates role which acts as functional foods and have nutraceuticals importance. (7)

### UNIT-IV

- 8. a) What regulations govern the functional food characteristics? (3)
- b) How the functional nature of food is assessed and maintained. (6)
- c) Elaborate the use of functional food to check the activity of various food inhibitors. (5)
- 9. a) Write a note on the recent developments in the preparation of functional food. (4)
- b) Discuss the role of storage and the environment on the characteristics of functional food a whole. How we can preserve the quality of these foods during storage. (10)

**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.**