

**SHIVAJI UNIVERSITY, KOLHAPUR**  
**DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY**

**SYLLABUS FOR ENTRANCE EXAM**  
**M. Sc. FOOD SCIENCE AND TECHNOLOGY**

The question paper will contain multiple-choice questions on the following topics.

The distribution of questions from each of the subjects listed below, will be as follow.

Food Processing and Preservation	50 Questions
Food Chemistry	10 Questions
Food Biochemistry and Nutrition	10 Questions
Food Microbiology	10 Questions
Food Biotechnology	10 Questions
Food Safety and Quality Control	10 Questions

**Food Processing and Preservation**

Principles of Food Processing. Methods of Food Processing and Their Effect on Food. Food Processing Industry Status and Scope. Sectors of Food Processing Industries. Principles of Preservation. Methods of Food Preservation. Types of Preservatives with their role.

**Food Chemistry**

Structure of Water Molecule. Phase diagram of water. Chemistry of Carbohydrates. Classification of Carbohydrates. Chemistry of Protein. Structure of Protein. Chemistry of Lipids. Chemical and Physical Properties of Lipids. Chemistry of Minerals and Vitamins. Classification of Minerals and Vitamins

**Food Biochemistry and Nutrition**

Human Anatomy and Human Nutrition. Elements of Carbohydrate, Fat and Protein Metabolism. Vitamins and their function in the body. Minerals and their function in body. Nucleic acids and their importance. Nutrient Deficiencies and Nutritional Disorders

**Food Microbiology**

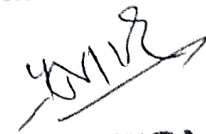
Basics of Microbiology. Types and Morphology of Microorganisms. Growth and Reproduction of Bacteria. Yeasts and Moulds. Basics of Culture Technique and Enumeration of Microorganisms. Microbial Food Spoilage.

**Agriculture and Food Biotechnology**

Basics of Agronomy, Horticulture, Forestry, Animal Husbandry, Fisheries, Agriculture Engineering. Organic Farming. Fundamentals of Food Biotechnology. History and Scope of Biotechnology. Cell Biology, Molecular Biology, Enzymes, Co-enzymes and co-factors, Hormones. Tissue Culture and Its Type.

**Food Safety and Quality Control**

Fundamentals of Food Safety. Food Safety Management System. Introduction to Food Quality. Definition Food Quality and Its type. Quality Assessment Methods. Physical Methods, Chemical Methods, Microbiological Methods, Sensorial Methods.

  
Head (I/C.),  
Department of  
Food Science & Technology