

SHIVAJI UNIVERSITY, KOLHAPUR
Department of Food Science and Technology

P. G. Entrance Examination – 2025

SYLLABUS FOR ENTRANCE EXAMINATION

(M. Sc. Food Science and Technology)

The question paper of the entrance examination 2025 will consist of 100 Multiple Choice Questions (MCQs) of 1 mark each, on following topics. The distribution of questions from each of the subjects listed below will be as follows.

Food Processing and Preservation	50 Questions
Food Chemistry	10 Questions
Food Biochemistry and Nutrition	10 Questions
Food Microbiology	10 Questions
Agriculture and 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 Food Preservation. Methods of Food Preservation. Types of Preservatives with their role. Principles of Food Packaging. Types and Methods of Food Packaging.

Food Chemistry

Structure of Water Molecule. Phase diagram of water. Chemistry of Carbohydrates. Classification of Carbohydrates. Chemistry of Protein. Structure and classification 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 Carbohydrates, Fat and Protein Metabolism. Vitamin 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 Microorganism. 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, 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.),
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Food Science & Technology