Syllabus for Entrance Examination for admission to M.Sc. Degree in Food Science and Nutrition

Unit 1
**Human Physiology** - Structure and function of following - Cell, Skeletal system, Blood and Circulatory system, Gastro-intestinal system, Excretory, Respiratory system, Endocrine system, Reproductive system, Immune system, Special senses.

Unit 2
**Nutritional biochemistry**
- Chemistry and metabolism of proteins, fats, CHO and nucleic acids.
- Enzymes and hormones.

Unit 3
**Principles of Nutrition** - Food groups and RDA, Functions, metabolism, sources and deficiency of nutrients [water, energy, CHO, proteins, fats, vitamins and minerals].

Unit 4
**Composition, processing, effect of cooking and uses of following categories of foods** - Cereals and millets, Legumes and oil seeds, Fruits and vegetables, Flesh foods and Eggs, Milk and milk products, Sugar and jiggery, Fats and oils.

Unit 5
**Nutrition through life cycle** - Pregnancy and lactation, infancy and childhood, school years and adolescence, adults and elderly.

Unit 6
**Food preservation and microbiology**
- Classification of food in relation to self life- characteristics of food and their storage behavior. Contamination and spoilage of different foods- cereals, legumes, sugar and sugar products, vegetables and fruits, flesh foods, egg, milk and milk products.
- Spoilage of foods- microorganism, enzymes, pests and rodents.
- Principles of food preservation and methods of preserving foods [traditional and modern]-

Unit 7
**Therapeutic nutrition** - Etiology, symptoms, and dietary management in diseases of the gastrointestinal tract, metabolic disorders, kidney diseases, diseases of cardio vascular system, diet for weight management, diet for allergic conditions.

Unit 8
**Food processing and Quality Control**
  a. Introduction to quality control, Evaluation & assurance, organization of quality control department.
  - Food laws and standards, control of food quality, evaluation of food safety.
  - Food adulteration- classification & detection methods of adulterants.
• Hygiene and sanitation- issue in food safety, potable water, cleaning and washing, cleaning agents, personal hygiene of the food handlers, food contamination and its hazards.


c. Food and nutrition labeling- information available on labels, international food standards.

d. Subjective and objective evaluation methods of evaluating food acceptability.

Unit 9
Assessment of Nutritional Status

1. Methods of assessing nutritional status:

Unit 10
Prevalence of nutritional problems and intervention programmes.

   a. Prevalence of nutritional problems in India with special reference to preschool children or women, protein energy malnutrition, nutritional anemia, deficiency of vitamin A, goiter, fluorosis, other vitamin deficiencies.