

F.N. – 101 Fundamentals of Food and Nutrition (Core)

Objectives:

- 1) To aware the students about afferent food groups and major foods.
- 2) To acquaint the students about the different nutrients of the food and its sources.
- 3) To aware the students about deficiencies of different nutrients, its effect on body, treatment.

Unit – 1

(A) Introduction of food and nutrition.

- Definition of food, classification of food, functions of food, food as a source of nutrients.
- Definition of nutrition, nutrient, Health sign of good and poor nutrition, about problems related to nutrition.

(B) Basic food groups.

- Cereals and pulses.
- Milk and milk products, vegetables and fruits.
- Sugar and Jaggery, Meat, Fish, Poultry, Condiments and spices
(their nutrient contribution)

Unit – 2

(A) Carbohydrates

- Classification
- Functions of carbohydrates
- Importance sources of carbohydrates and its requirement.

(B) Lipids

- Classification and functions
- Properties and rancidity of fat.
- Sources and requirement and deficiency of fat.

Unit – 3

(A) Protein

- Definition, chemical composition, classification and function of protein, Amino acids classification, essential amino acids and non essential amino acids.
- Nutritional significance of Amino acids, sources and requirement of protein and deficiency of protein.

(B) Energy

- Definition and unit of energy, energy yielding food factors, energy requirement, determination of energy by bomb calorimeter, gross energy value of food.
- Physiological energy value of food, Basal metabolism, definition, standard for BMR, factors affecting BMR, determination of BMR by Benedicts and both apparatus, determination of energy metabolism during work by max plank respirometer.

Unit – 4

(A) Vitamins & Minerals

- Classification and general functions of vitamins and Minerals.
- Fat soluble vitamins A,D,E,K and deficiency diseases of fat soluble vitamins.
- Water soluble vitamin B₁, B₂, B₆, deficiency diseases of water soluble vitamin.
- Sources, Requirement, Functions and Deficiency of Calcium, Phosphorus, Iron, Iodine.

Practical:

- Preparation of different nutrient rich recipe.
- Planning and preparation of carbohydrate rich diet.
- Planning and preparation of protein rich diet.
- Planning and preparation of energy rich diet.
- Planning and preparation of vitamin D rich diet.
- Planning and preparation of vitamin B₁ and B₂ rich diet.
- Planning and preparation of vitamin C rich diet.
- Planning and preparation of vitamin calcium rich diet.
- Planning and preparation of vitamin Iron rich diet.

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- 3) The rov well Williams, essentials of nutrition and Diet therapy, fifth Glition, Tinu mirror / Mospay company, westline industrial prive, St. Louis Missouri – 1990.
- 4) Hand book of food preparation CFTR1.
- 5) E. Gopalan; B.V ramsastri, nutritive value of Indiam foods, national institute of nutrition, Indian council of Medical Researal, Hyderabad – 7.