

## OPEN ELECTIVE FOR OTHER DISCIPLINES

II SEMESTER – BIOCHEMISTRY IN DAY- TO- DAY LIFE: BC E 457

Softcore

Total Number of Lecture Hours: 36  
of Credits: 03

Total Number

### Unit I

**12 hrs. Nutrition-** Concepts of nutrients, essential nutrients and their classification. Basal Metabolic Rate (BMR), factors affecting BMR. Specific dynamic action of foods. **Macro and micronutrients:** Sources, requirements, functions and deficiency symptoms. **Water:** Distribution in the body, function, special properties of water, water balances and factors affecting water balance. **Carbohydrates-**Dietary sources, Essentiality of carbohydrates, Dietary fibres.

### Unit II

12

**hrs. Proteins-**Essential amino acids, nutritional classification of proteins, supplementary value of proteins, protein calorie malnutrition, PER, EV and chemical score, Kwashiorkor and Marasmus, Nitrogen balance, Malnutrition, protein calorific value. **Fats-**Sources, invisible fat, essential fatty acids, PUFA. **Dietary formulation** for different age groups: children, adults, old age and pregnancy.

### Unit III

12

**hrs. Vitamins-**Fat soluble and water soluble vitamins, pro-vitamins, antivitamins, dietary sources, daily requirement, function and deficiency symptoms of vitamins. Hyper-vitaminosis, vitamin-like compounds, Disorders. **Food Drug Interaction:** Effect of Drugs on food and nutrition.

### References:

1. Nutritional Biochemistry, Tom Brody (1994) Academic Press.
2. Frontiers in Nutrition, Ed. T. Wilson and N.J. Temple, (2000), Humana
3. Nutrition & Health in Developing Countries, eds. R. Semba and M.W. Bloem, (2000), Humana.