SUBJECT CODE : NMEBC2

FOOD AND NUTRITION

Unit 1

Sources, food composition, properties and storage of common foods. Functions of food in relation to health- classification of foods based on nutrients. Food preservation- reasons for preserving foods, methods of preservation – an understanding of the principles involved, food additive in processed food and their effects. Food groups to provide nutritive requirement for normal health- body building foods, energy foods and protective foods.

Unit 2

Basics for computing nutrient requirements: latest concepts in dietary recommendations, RDA – ICMR and WHO: their uses and limitations. Definition of unit of energy – cal, RQ, SDA and NPU. Energy metabolism: Basal and resting metabolism – influencing factors, Methods to determine energy requirements and expenditure. The sources and functions of essential nutrients – proteins (high biological and low biological value), carbohydrates and fats. Sources and functions of dietary fibre, Pro and Prebiotics.

Unit 3

Micro and macro mineral nutrients: Distribution sources, metabolic functions and deficiency manifestations – Calcium, Phosphorus, Sodium, Potassium, Iron, Copper, Selenium and Zinc.

Fat and water soluble vitamins – Occurrence, properties and function – Hyber and Hypovitaminosis. Role of Vitamin as Antioxidant.

Unit 4

Nutrition through life cycle. Special needs of Infants, children, adolescents, pregnant and lactating women, convalescents and old persons

Unit 5

Principles of diet therapy. Diet during stressed conditions- laborers. Patients- therapeutic diets for anemia, malnutrition, obesity, diabetes mellitus and allergy.

References

1. Food Chemistry – L.G. Meyer.
2. Food Science – Polter.
3. Fundamentals of food chemistry – W. Heimann.
4. Introducing food chemistry – Garrad.
5. Essentials of food and nutrition – Vol I & II, Swaminathan M.
6. Human nutrition & Dietics – Passemore R and others.