

ST. JOSEPH'S COLLEGE FOR WOMEN (AUTONOMOUS), VISAKHAPATNAM

Time: 4 Hrs/Week

NUTRITION SCIENCE

Marks:100

OBJECTIVES : To enable the students to

- Understand the relationship between nutrition and human well-being.
- learn the nutritional needs and deficiency symptoms in different age groups and special conditions.

COURSE:

UNIT I:

- a. Inter-relationship between nutrition and health. Signs of good and poor nutrition.
- b. **ENERGY:** Definition, units of energy. Basal Metabolic Rate-Definition of BMR, factors affecting BMR. Factors affecting total energy requirement. Energy malnutrition: Underweight and obesity, study of RDA of all nutrients.

UNIT II: Major nutrients:

- a. **CARBOHYDRATES :** Sources, functions, classification – available and non available. Role of fibre in human diet.
- b. **LIPIDS:** Sources, functions, classification. Essential Fatty acids – their sources and effects of deficiency.

UNIT III: PROTEIN: Sources, functions, Classification as Essential and non essential amino acids , quality of proteins-complete and incomplete protein. Energy protein malnutrition: etiology, symptom, prevention, incidence and treatment with low – cost food mixtures.

UNIT IV: Minor Nutrients: VITAMINS: Definition, classification, nomenclature and units of measurement.

- a. Fat soluble vitamins – A, D.E and K.
- b. Water soluble vitamins – thiamine, riboflavin, niacin, pyridoxine and other B complex vitamins and ascorbic acid - Sources, function, deficiency symptoms.

UNIT V: a. MINERALS: Calcium, Fluorine, Iron, Iodine, Zinc - sources, functions, requirements and deficiency states.

- b. **WATER:** Body water and its distribution – extra-cellular and intracellular fluid compartments - sources, functions requirements, Dehydration and Oral Rehydration Therapy.
- c. Inter-relationship between nutrients – few examples.

SUGGESTED REFERENCES :

1. Swaminathan M. (1985) Essentials of food and nutrition. Vol I & II. BAPPCO. Bangalore.
2. Mc Devitt M. and Mudambe S.R. (1969) . Human Nutrition – Principles and application in India. Prentice Hall of India Ltd. Delhi.
3. Fleck H. (1981) – Introduction to Nutrition – Collier Mac Millan publishers, London.
4. Robinson C.H. and Lawler MR. (1982) – Normal and Therapeutic nutrition. Mac millan publishing Co. Pvt. New York.
5. Shukla P.K. (1982) – Nutritional problems of India . Prentice Hall (9) Ltd., New Delhi.

ST.JOSEPH'S COLLEGE FOR WOMEN (AUTONOMOUS), VISAKHAPATNAM

Time: 2 Hrs/Week

**NUTRITION SCIENCE
PRACTICALS**

Max. Marks: 50

OBJECTIVES: To enable the students to

- acquire food preparation skills
- prepare recipes in such a way that there is minimal loss of nutrients and optimum retention of taste.
- Become aware of the local cuisine in order to plan family menus.
- Follow recipes available from various sources.
- Present food in an attractive and appetizing manner.

COURSE:

UNIT – I: Techniques of weighing and measuring foods

UNIT – II: METHODS OF COOKING: Recipes based on different methods of cooking.

UNIT – III: PREPARATION & SERVICE of recipes based on

- i. cereals and pulses
- ii. Fruits and Vegetables
- iii. Egg, meat and fish
- iv. milk

- as main ingredient and in combination with other food groups. Calculation of cost and nutritive value of one serving.

Suited for different meals i.e., breakfast, lunch/dinner and snacks at different cost levels

UNIT – IV: Critical analysis of (a) recipes from two sources.

(b) Any video presentation of cooking demonstration

REFERENCE BOOKS:

1. Philips, T.E. (1989) Modern cookery for teaching and Trade Vol I & II, Orient Longman Ltd. Bombay,
2. Peckham, G.C., (1972) Foundation of Food Preparation, Harper Row Publishers, New York.

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