**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.

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**COURSE:**

**UNIT I:**

1. . Inter-relationship between nutrition and health. Signs of good and poor

nutrition.

1. **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:**

1. **CARBOHYDRATES :** Sources, functions, classification – available and non available. Role of fibre in human diet.
2. **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.

* 1. Fat soluble vitamins – A, D.E and K.
  2. 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.

1. **WATER:** Body water and its distribution – extra-cellular and intracellularfluid compartments - sources, functions requirements, Dehydration and Oral Rehydration Therapy.
2. 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.

1. Shukla P.K. (1982) – Nutritional problems of India . Prentice Hall (9) Ltd., New Delhi.

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

**Time: 2 Hrs/Week NUTRITION SCIENCE Max. Marks: 50**

**PRACTICALS**

**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 culsine in order to plan family menus.
* Follow receipes 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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