WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION

SUBJECT: NUTRITION (NUTN)

CLASS – XI **SEMESTER – II** **FULL MARKS: 35**

Unit	Topics	Hrs	Marks
Unit 1 Micromolecules In Nutrition I	**I. Vitamins in Nutrition: Basic concept:** ▪ Vitamins definition, history of term vitamin ▪ Elementary examples concept and Antivitamin, of Provitamin, Pseudo vitamin, Avitaminosis, Hypervitaminosis. ▪ Characteristic features of vitamins (elementary). ▪ Classification of Vitamins based on solubility, Difference between fat and water soluble vitamins. **II. Vitamins (Fat soluble):** ▪ Fat soluble vitamins A,D,E,K elementary concept of their chemical name, dietary sources, daily requirements physiological functions, deficiency symptoms/diseases and excess intake effects (Deficiency diseases to be detailed in later semesters). **III. Vitamins (Water solubleland new concept of neutraceuticals:** ▪ Water soluble vitamins-B complex Vit C- elementary concept of their chemical name, dietary sources, requirements, daily physiological functions, deficiency symptoms/diseases and excess intake effects (Deficiency diseases to be detailed in later semesters) ▪ Current application of Nutrition in health sciences: Elementary concept of Antioxidants, Phytochemicals, Nutraceuticals, Prebiotics and Probiotics, Functional foods	1 8 12	9
Unit 2 Macromolecules In Nutrition II	**I. Minerals in Nutrition:** ▪ Minerals definition, Macro and Microelements/trace elements elementary concept ▪ Macro elements Calcium, Phosphorous, Magnesium, Sodium and Potassium -their dietary sources, daily requirements, Bioavailability (Ca only), physiological functions and deficiency symptoms effects of excess intake Deficiency diseases to be detailed in later semesters) ▪ Micro elements- Iron, lodine, Fluorine and Chlorine dietary sources - their daily requirements, Bioavailability (Fe only), physiological functions and deficiency symptoms effects of excess intake (Deficiency diseases to be detailed in later semesters) **II. Water in health and Nutrition:** ▪ Role of water in human physiology ▪ Water Balance and daily water ▪ intake amount, thirst center of brain ▪ Nervous, endocrine and renal mechanism of water balance regulation(outline elementary concept only) and ▪ Effect of positive and negative water balance	10 2	11

Unit 3 Meal Planning And Food Groups	**I. Meal planning** ▪ Meal planning concept, aims and objectives principles and the governing factors of meal planning ▪ Steps in meal panning (outline concept only) ▪ Advantages of Meal planning ▪ Adult Consumption Unit or Man Value **II. Food Groups and Commodities:** ▪ Basic food groups highlighting ICMR 2010 Classification ▪ Food Pyramid and its role in Balanced Diet ▪ Plate method My plate of the day) for balanced diet concept ▪ Food Commodities in food groups and only brief idea of their nutritive value namely: Cereals and Millets, Pulses and Legumes, Soya bean, Fruits and Vegetables Milk and Milk products, Poultry Egg, Meat, Fish Nuts, Oilseeds, Sugar andJaggery, Honey. ▪ Low cost balanced diet. ▪ Vegetarianism and its types.	2 10	7
Unit 4 Meal Preparation And Daily Allowances For Indians	**I. Meal preparation:** ▪ Cooking-objectives, need and advantages ▪ Different methods of cooking-their process, temperature involved and advantages. ▪ Effect of cooking on different nutrients ▪ Precautions for prevention of loss of nutrients while cooking or pre preparationof food. ▪ Means to increase nutritive value of food ▪ Process of preparation of the following with retention of proper nutritive value: Rice, vegetables, meat, fish and egg ▪ Kitchen Sanitation and Kitchen garden-it's utility. **II. Balanced diet for different age groups:** ▪ Balanced Diet concept, RDA for Indians-2020 (NIN), concept of EAR (NIN 2020) latest updated values. ▪ Rules for preparing a balanced diet and Nutritional allowances in different age groups namely elementary concept only): a. Adult nutrition (Reference Man and Women) b. Preschoolers nutrition c. Nutrition for School going children and packed lunch, d. Adolescent nutrition and their feeding problem like Anorexia and Bulimia Nervosa, use of junk food, fast food-ill effects e. Geriatric nutrition	2 10	7

Semester II:

CLASS TYPE	HOURS
Theory Classe	60
Practical Classes	20
Remedial/Tutorial/Home Assignments	10
TOTAL	90

Total Teaching Learning Contact Hours in each academic year inclusive of theory, practical and remedial sessions (110 hours in Semester I and 90 hours in Semester 10)-200 contact hours.