Syllabus for Undergraduate Certificate Programme

Semester-I

Major Theory Paper - I

Home Science

Fundamentals of Food and Nutrition

HSC-MJ-1(T)
Credit -04 (Lecture-60)

Full Marks 100
SIE-25
ESE-75
Pass Marks-40
Hours:3

Instructions to Question Setter for Semester Internal Exam

There will be two groups of questions. Group A is compulsory which will contain two questions. Question No. 1 will be of very short answer type consisting of five questions of 1 mark each. Question No. 2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of 10 marks each, out of which any one to answer. Class attendance score of 5 marks.

Instructions to Question Setter for End Semester Exam (ESE):

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type six questions of fifteen marks each, out of which any four are to answer.

Objectives:

1. To understand the basic concept of Food and Nutrition.
2. Develop the understanding of the role of various nutrients & their requirements, deficiency, excess and metabolism of nutrients.
3. To learn about nutritional contributions of different food stuffed.
4. To learn about different methods of improving nutritional quality of food.

Theory :

Unit-I Meaning and Definition of Nutrition- Optimum nutrition, Good nutrition and Balance diet.

Meaning and Definition of Nutrients – Classification of nutrients : Macronutrients and Micro nutrients.

Functions of food and its significance – Physiological functions, social work and psychological functions.

Unit-II Macronutrients :

Carbohydrate : Introduction structure, classification, function, dietary sources, recommended dietary allowances, clinical signs and symptoms of deficiency and excess.

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Protein : Introduction structure, classification, function, dietary sources, recommended dietary allowances, clinical signs and symptoms of deficiency and excess.

Fat: Introduction structure, classification, function, dietary sources, recommended dietary allowances, clinical signs and symptoms of deficiency and excess.

Unit-III Micronutrients :

Minerals: Introduction structure, classification, function, dietary sources, recommended dietary allowances, clinical signs and symptoms of deficiency and excess of calcium, iron, iodine, sodium, potassium, phosphorous and zinc.

Vitamins : Fat soluble vitamins (A, D, E, K) : Introduction, functions, dietary sources, recommended dietary allowances, clinical sings and symptoms of deficiency.

Water soluble vitamins (Thiamine, Riboflavin, Niacin, Pyridoxine, Folic Acid & Vitamin C) : Introduction, functions, dietary sources, recommended dietary allowances, clinical sings and symptoms of deficiency.

Unit-IV Water : Introduction, structure, properties and function, water balance in body, water activity, quality of drinking water.

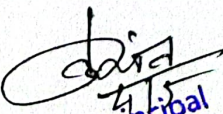### Unit-V Digestion, Absorption and Metabolism :

Carbohydrate : Digestion in mouth, stomach, duodenum, small intestine, large intestine, absorption of carbohydrate and metabolism of carbohydrate.
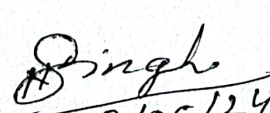
Protein: Digestion in mouth, stomach, duodenum, small intestine, large intestine, absorption of protein and metabolism of protein.

Fat: Digestion in mouth, stomach, duodenum, small intestine, large intestine, absorption of fat and metabolism of fat.

Recommended Books:
1. Food & Nutrition   M Swaminathan
2. Food Science   Mudambi, S.R.
3. Nutritional Science   B. Sri Lakshmi
4. Aahar & Poshan   Verma & Pandey
5. Aahar evam Poshan Vigyan   Dr. Aasha Kumari
6. Aahar & Poshan   Dr. Reena Khanuja

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