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HS I

SEMESTER II
CORE COURSE 4: (HSCG-CC4) FUNDAMENTALS OF NUTRITION AND
FOOD SCIENCE
(CREDITS: THEORY-4, PRACTICAL-2)

Unit 1 Basic concepts in food and nutrition

- Basic terms used in study of food and nutrition
- Understanding relationship between food, nutrition and health
- Functions of food-Physiological, psychological and social

Unit 2 Nutrients

Functions, dietary sources and clinical manifestations of deficiency/ excess of the following nutrients:

- Carbohydrates, lipids and proteins
- Fat soluble vitamins-A, D, E and K
- Water soluble vitamins – thiamin, riboflavin, niacin, pyridoxine, folate, vitamin B₁₂ and vitamin C
- Minerals – calcium, iron and iodine

Unit 3 Food Groups

Selection, nutritional contribution and changes during cooking of the following food groups:

- Cereals
- Pulses
- Fruits and vegetables
- Milk & milk products

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- Eggs
- Meat, poultry and fish
- Fats and Oils

Unit 4 Methods of Cooking and Preventing Nutrient Losses

- Dry, moist, frying and microwave cooking
- Advantages, disadvantages and the effect of various methods of cooking on nutrients
- Minimising nutrient losses

PRACTICAL

Use of basic terminology in day to day cooking.

• Weights and Measures

Standard and household measures for raw and cooked food.

• Different cooking methods

Pressure cooking

Open pan cooking

Broiling

Braising

Baking

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Roasting

Frying

· Sprouting of pulses

· Basic fermentation technique

Gluten Formation

RECOMMENDED READINGS

• Khanna K, Gupta S, Seth R, Mahna R, Rekhi T (2004). *The Art and Science of Cooking: A*

Practical Manual, Revised Edition. Elite Publishing House Pvt Ltd.

• Raina U, Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S (2010). *Basic Food Preparation:*

A Complete Manual, Fourth Edition. Orient Black Swan Ltd.

• Bamji MS, Krishnaswamy K, Brahman GNV (2009). *Textbook of Human Nutrition*, 3rd

edition. Oxford and IBH Publishing Co. Pvt. Ltd.

• Srilakshmi (2007). *Food Science*, 4th Edition. New Age International Ltd.

• Wardlaw and Insel MG, Insel PM (2004). *Perspectives in Nutrition*, Sixth Edition. Mosby.

• Chadha R and Mathur P (eds). *Nutrition: A Lifecycle Approach*. Orient Blackswan, Delhi.

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