

B.Sc. Home Science Syllabus 2018

Semester I Group I Paper I- Fundamentals of Food & Nutrition

Unit 1

Basic concepts in food and nutrition

- Concept of nutrition and health,
- Relationship between food, nutrition and health
- Functions of food-Physiological, psychological and social

Unit 2

Food Groups: classification based on: Source, Functions

Selection & nutritional contribution of the following food groups:

- Cereals
- Pulses
- Fruits and vegetables
- Milk & milk products
- Eggs
- Meat, poultry and fish
- Fats and Oils

Unit 3

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
- Methods of improving nutritional value: Germination, fortification, combination, fermentation & enrichment

Unit 4

- Food adulteration: Definition, common adulterants in food and their effects on health
- Food laws and standards: National food laws: FSSAI, PFA

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, Brahmam 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. 2015

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Semester I Group I Paper II- Human Physiology

Unit 1

1. Introduction to Human body: Organs, tissue and cell, cell structure, cellular organelles and their functions.
2. General account of skeletal system
3. Blood - Composition and functions.
4. Lymphatic system: Lymph glands and its function
5. Spleen: structure and functions
6. Cardiovascular system:
 - Structure of heart, blood circulation
 - Cardiac cycle
 - Blood pressure (Definition and factors affecting)

Unit 2

7. Respiratory system: general overview of the respiratory passage, structure and functions.
Mechanism of respiration(internal and external respiration)
8. Digestive system:
 - Overview of the Gastrointestinal Tract
 - Salivary glands
 - Structure and functions of: Stomach, small intestine, large intestine
Liver, Pancreas, Gallbladder

Unit 3

9. Nervous system: Structure of nerve cell, nerve impulse transmission, types of nervous system, functions of different parts of brain
10. Endocrine System:
 - Overview of endocrine system. Structure of main endocrine glands and their functions: Pituitary, Thyroid, parathyroid, adrenal and Pancreatic hormones

Unit 4

11. Excretory System:
 - Structure and functions of kidney and nephrons.
12. Reproductive System:
 - Male and female reproductive organs, general structure and function
 - Physiology of Menstruation
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RECOMMENDED READINGS

- Ganong WF (2014). Review of Medical Physiology, 24th ed. McGraw Hill.
- Ross and Wilson (2013). Anatomy and Physiology in health and illness, 11th ed. Medical Division of Longman Group Ltd.

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- Guyton, A.C. and Hall, J.E.(2000)Textbook of Medical Physiology.10th ed. India: Harcourt Asia
- Das, A.(2004)Medical Physiology-Vol. I and II 3rd Books and Allied (P) Ltd.
- Tortora, G.J and Grabowski, S.R.(2000)Principles of Anatomy and Physiology.9th ed. John Wiley and Sons.Inc.
- Chaudhari S K.(2000) Concise Medical Physiology.3rd Edition. Central.
- Mahapatra, A.B.S.(2003):Essentials of Medical Physiology.3rd Edition. Current Books International.

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Semester I Group II Paper 1 Fundamentals of Human Development

Unit 1

Understanding Human Development

Definitions, scope and multidisciplinary nature of Human Development
Contexts, stages and domains of development, life span development approach

Unit 2

Historical perspective of human development
Methods of studying child/ Human development

Unit 3

Principles of Growth and Development
Role of environment and inheritance on development

Unit 4

Prenatal development (three stages of intra-uterine development and stages of birth process. Prenatal influence on the fetus, biological risks, age of mother, illness, diet and nutrition, stress and emotional strain, environmental hazards)

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Semester I Group II Paper 2 Fundamentals of Extension Education

Unit-I

1. Concept of Extension:
 - a) Meaning of extension
 - b) Origin and wider understanding of the meaning of extension education
 - c) Principles, scope, limitations
 - d) Goals, philosophy and role of extension education

Unit-II

2. Extension worker
 - a) Role of extension worker
 - b) Qualities
 - c) Training
3. Extension Education Process:
 - a) Environment for learning, role of educator, role of the people in learning and development

Unit-III

4. Leadership Patterns:
Traditional leadership –role and functions
Emerging leadership-Shared leadership
Leadership and community organization for development

Unit-IV

5. Home Science Education as empowerment :
 - a) The interdisciplinary nature of Home science education
 - b) The role of Home Science education for personal growth, professional development and national development

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Semester I Group III Paper 1 Fundamentals of Textiles

Unit 1

1. a. Definition and Classification of textile fibres.
b. General and secondary properties of textile fibres.
2. History, manufacture, properties (chemical, physical and microscopic) and importance of following textile fibres:
3. Natural Fibres
 - i. Protein: wool, silk
 - ii. Cellulose : cotton, linen
 - iii. Mineral : Asbestos

Unit 2

4. Man-made/Synthetic Fibres:
 - i. Cellulose: Rayon, acetate
 - ii. Polyamide : Nylon 6, Nylon 6,6
 - iii. Polyester: Terene
 - iv. Acrylonitrile: Orlon
 - v. Mineral: Glass ,Metallic

Unit 3

5. Yarn: definition
 - a) Yarn construction Process : Mechanical spinning, Chemical Spinning
 - b) Type of yarn
 - i. Staple yarns
 - ii. Filament yarns
 - iii. Simple Yarn
 - iv. Complex yarns
 - c) The effect of yarn on the finished fabrics

Unit 4

- d) Properties of yarns:
 - i) Yarn numbering system-count, denier, Tex
 - ii) Twists in yarns
- e) Textured yarns
- f) Fibre blends
- g) Thread

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Semester I Group III Paper 2 Fundamentals of Family Resource Management

Unit-I

1. Introduction to management:
 - a) Basic concepts of management
 - b) Purpose of Management
 - c) Obstacles to the improvement of management
 - i) Lack of awareness of management
 - ii) Lack of awareness of resources
 - iii) Failure to evaluate result of management
 - iv) Lack of information
 - v) Seeking readymade answer to problems

Unit-II

2. Management Process:
 - a) Planning
 - b) Controlling
 - c) Evaluation
3. Factors motivating management
 - a) Goal-definition, types and utility
 - b) Values- importance, sources of values, classifications, characteristic, changing values
 - c) Standards-definition, classification

Unit-III

4. Decision Making
 - a) Role of decision making in management
 - b) Steps in decision making
5. Resources in the family:
 - a) Classification
 - b) Factors affecting the use of resources
 - c) The family life cycle

Unit-IV

6. Money Management:
 - a) Family income
 - b) Expenditure
 - c) Family budget
 - d) Savings
7. Time management:
 - a) Importance
 - b) Tools in time management
 - c) Process