

## 12. HOME SCIENCE (CODE NO. 064) (CLASSES – XI AND XII)

Home Science as a discipline aims to empower learners by developing understanding of five different areas, namely:

- Food and Nutrition
- Human Development, Childhood Studies
- Community Resource Management and Extension
- Fabric and Apparel Science
- Development Communications and Extension

The subject helps students to understand changing needs of Indian society, academic principles as well as develop professional skills.

This would make them competent to meet challenges of becoming a responsible citizen.

### Objectives:

The syllabus at Senior Secondary level develops an understanding in the learners that the knowledge and skills acquired through Home Science facilitates development of self, family and community. It endeavours to -

1. Acquaint learners with the basics of human development with specific reference to self and child.
2. Help to develop skills of judicious management of various resources.
3. Enable learners to become alert and aware consumers.
4. Impart knowledge of nutrition and lifestyles to enable prevention and management of diseases.
5. Inculcate healthy food habits.
6. Help to develop understanding of textiles for selection and care of clothes.
7. Develop skills of communication to assist in advocacy and dissemination of knowledge to community.

### HOME SCIENCE (Code No. 064) CLASS XI (2013-14) COURSE STRUCTURE (THEORY)

One Paper (Theory)

70 Marks

Time: 3 Hours

Periods-220

	Unit	No of periods	No of marks
I.	Concept of Home Science and its Scope	5	25
II.	Human Development: Life Span Approach (Part I)	40	
III.	Food, Nutrition, Health and Fitness	45	30
IV.	Family and Community and Resources	45	
V.	Fabric and Apparel	45	15
VI.	Community development and extension (Part I)	5	
	Practical	35	30
	<b>TOTAL</b>	<b>220</b>	<b>100</b>

**Unit I: Concept of Home Science and its Scope** **05 Periods**

- (i) Evolution of the discipline of Home Science
- (ii) Five major areas
- (iii) Relevance in improving the quality of life

**Unit II: Human development: life span approach (Part I)** **40 Periods**

Introduction to different stages: infancy, early childhood, childhood, adolescence, adulthood and old age

- (i) **Infancy (birth to 2 years)** : Physical - height, weight and body proportions; motor development during 0-3 months, 3-6 months, 6-9 months, 9-12 months and 1-2 years (milestones only); social and emotional development; expression of emotions, socialization; cognitive and language development.
- (ii) **Early childhood (3- 6 years):** characteristics
- (iii) **Childhood (7 - 11 years):** behavioural problems of children and suggestive measures
  - (a) **Protection from preventable diseases:** immunization - concept and types (natural and acquired), breast feeding (one of the ways to develop natural immunity); immunization chart; symptoms, prevention, after care and incubation period of childhood diseases - tuberculosis, diphtheria, pertussis (whooping cough), tetanus, polio, measles, cholera, diarrhoea and chicken pox.
  - (b) **Substitute care at home and outside:**
    - Grandparents, crèche/day care centres
    - Integrated Child Development Scheme (ICDS) - objectives and functions.
  - (c) Special needs and care of disadvantaged and differently abled children: socially disadvantaged, visually impaired (partial and complete), hearing impaired, orthopedically impaired (affected/missing limb)
  - (d) **Managing Emergencies**  
First aid to cuts, burns, fractures, bites (snake, dog and insects), poisoning, fainting, asthma.

**Unit III: Food, Nutrition, Health and Fitness** **45 Periods**

- (i) Definition of food, nutrition, (WHO) health and fitness.
- (ii) **Functions of food:**
  - Physiological (body building, energy giving, protective, regulatory)
  - Psychological
  - Social
- (iii) **Selection of food for optimum nutrition and good health:**
  - (a) Nutrients: sources, functions and deficiency and its prevention; Proteins, Carbohydrates, Fats, Vitamins- Fat soluble (A, D, E, K) and water soluble (B1, B2, Niacin, Folic acid, B12 and Vitamin C), Minerals (Calcium, Iron, Zinc and Iodine).
- (iv) **Maximising nutritive value of food by proper selection, preparation and storage:**
  - (a) **Selection and Storage of foods:** Perishable, semi-perishable, non-perishable,

convenience foods and their storage. Selection of fruits, vegetables, egg, fish, poultry, milk and milk products.

- (b) **Food Processing:**
- Reasons of spoilage of food
  - Food processing methods - Dehydration, Freezing, Use of chemicals (salt, sugar, oil).
- (c) **Preparation of food :**
- Principles
  - **Methods:** boiling, steaming, pressure cooking, deep and shallow frying, baking, sautéing, roasting, grilling, solar cooking and microwave cooking.
  - Loss of nutrients and steps to minimise nutrient loss during preparation.
  - Methods of enhancing nutrient availability germination, fermentation, fortification and food combination.

#### Unit IV: Family and Community Resources

45 Periods

- (i) **Concept of Family and Community resources**
- (ii) **Types, Management and Conservation of:**
- (a) *Human / Personal Resources:* knowledge, skills, time, energy, aptitude.
- (b) *Non-human / material resources:* money, goods, property.
- (c) *Community facilities / shared resources:* Schools, parks, hospitals, roads, transport, water, electricity, library, fuel and fodder.
- (iii) **Management:**
- (a) Meaning and need for management.
- (b) Steps in management: planning, organizing, controlling, implementing and evaluation.
- (c) Decision making and its role in management.
- (iv) **Time, energy and space management:**
- (a) Need and procedure for managing time and energy.
- (b) Work simplifications: Techniques for time and energy management.
- (c) Need and ways of space management.
- (d) Elements of art and principles of design.
- (e) Use of colours, light and accessories in space management; Prang colour wheel, dimensions of colours, classes and colour schemes.

#### Unit V: Fabric and Apparel

45 Periods

- (i) **Introduction to Fibre Science:**
- (a) Classifications of fibre
- Natural cotton, silk and wool
  - Manufactured: (rayon, nylon and polyester)
  - Blends - Characteristics (terry cot, terry silk, terry wool)

(b) Characteristics of fibre

(c) Suitability for use

**(ii) Fabric Construction:**

(a) *Yarn making*: Basic procedure of making yarn.

- Simple : Two Ply, Four Ply, Multiple and Cord
- Novelty: Slub, Knot, Flock, Spiral
- Blended yarns

(b) *Weaving*: Basic mechanism, types of weaves: plain (basket and rib), twill, sateen and satin weave. A brief mention of special weaves: pile and jacquard weaves.

(c) Effect of weaves on appearance, durability and maintenance of garment.

(d) Other methods of fabric constructions: knitting, non-woven fabrics: felting and bonding

**(iii) Fabric Finishes:**

(a) Meaning and importance.

(b) Classification of finishes

- Basic finishes: (cleaning scouring), singeing, bleaching, stiffening, calendaring and tendering.

**(iv) Dyeing and Printing**

(a) Importance of dyeing and printing

(b) Types and sources of Dyes-natural, synthetic

(c) Methods of Dyeing and Printing: Plain Dyeing, tie and dye, Batik printing.

**Unit VI: Community Development and Extension (Part I)**

**05 Periods**

- Respect for girl child.

- Income generating schemes :

**DWCRA** (Development of Women and Child in Rural Area)

**MNREGA** (Mahatma Gandhi National Rural Employment Guarantee Act, 2005)

1. Communication- concepts and methods

**HOME SCIENCE**  
**CLASS: XI (2013-14)**

**PRACTICAL**

**Maximum Marks: 30**

**Periods: 35**

**I. Human Development: Life Span Approach**

1. Visit a child care centre (Day Care/ Crèche/ Anganwadi/ Nursery Schools/ any other). Write a report on facilities and activities.
2. Select a child with special needs in the neighbourhood. Write a report about her/his special requirement related to:-
  - a. Care
  - b. Education
  - c. Physical Infrastructure needed
3. Observation of any two children in different stages of age in the neighbourhood and report on their activities and behaviour.
4. Prepare an educational toy by using local material.

**II. Food Nutrition Health and Fitness**

1. Plan and prepare a dish rich in selected nutrients (Iron, Calcium, Protein, Fibre).
2. Prepare one preserved product; also prepare a suitable label for it.
3. Prepare dishes involving the following :  
*Germination, Fermentation and Combination.*

**III. Family and Community Resources**

- a. Using elements of art and principles of design, prepare Rangoli, Flower arrangement and one accessory for decoration.
- b. Critically evaluate your residential space and suggest improvements.
- c. Prepare a day's routine, listing activities and time spent in each. Critically evaluate for improvement for time and energy saving.
- d. Cleaning.

**IV. Fabric and Apparel**

- a. Prepare paper samples of the following weaves:  
*Plain, Rib, basket, twill (any two), satin and sateen.*
- b. Collect samples of various fabrics and identify the following weaves: Plain, rib, basket, twill, satin and sateen.
- c. Identification of various types of fibres using burning test.
- d. Prepare five samples of dye and dye.

**V. Community Development and Extension**

- a. Plan message for 'respect for girl child', 'women's empowerment', 'income generating scheme' using different modes of communication for different focus groups.
- b. Make a leaflet or a pamphlet for consumer education on any topic.

**Reference books for teachers:**

1. **Human Ecology and Family Sciences - Part I, Class-XI, NCERT Publication**
2. **Human Ecology and Family Sciences - Part II, Class-XI, NCERT Publication**

HOME SCIENCE		QUESTION PAPER DESIGN 2013-14					Class XI	
Time: 3 hrs		Code No.- 064					Max.Marks-70	
S. No.	Typology of Questions	Learning outcomes & Testing Skills	Very Short Answer -1 Mark	Short Answer -I 2 Marks	Short Answer -4 Marks	Case study and picture based 3 marks	Long Answer - 5 Marks	Marks %
1	<b>Remembering- (Knowledge based</b> Simple recall questions, to know specific facts, terms, concepts, principles, or theories; Identify, define, or recite, information)	<ul style="list-style-type: none"> <li>Reasoning</li> <li>Analytical Skills</li> <li>Critical thinking</li> </ul>	2	2	1	1	1	18 %
2	<b>Understanding- (Comprehension</b> -to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase information)		1	1	1		1	17 %
3	<b>Application</b> (Use abstract information in concrete situation, to apply knowledge to new situations; Use given content to interpret a situation, provide an example, or solve a problem)		1	2	2	1	1	30 %
4	<b>High Order Thinking Skills (Analysis and Synthesis-</b> Classify, compare, contrast, or differentiate between different pieces of information; Organize and/ or integrate unique pieces of information from a variety of sources)		1	1	1		1	17 %
5	<b>Evaluation and Multi-Disciplinary-</b> (Appraise, judge, and/ or justify the value or worth of a decision or outcome, or to predict outcomes based on values)		1	1	1			10 %
	<b>TOTAL</b>		6×1 = 6	2×7 = 14	4×6 = 24	3×2 = 6	5×4 = 20	70
	<b>ESTIMATED TIME</b>		10 min.	35 min.	50 min.	20 min	50 min.	165min. + 15 min. For revision

Note: No Chapter wise weightage, care should be taken to cover all chapters.