APPENDIX A

MODEL SYLLABUS OF HOME SCIENCE GROUP FOR HIGHER SECONDARY PROGRAMME

General objectives:

1. To develop an appreciation of the home and family life in our Indian way of living.

2. To develop an understanding and appreciation of homemaking as a respectable and dignified vocation.

3. To develop effective, intellectual, managerial, social and creative abilities and skills essential for satisfying home-making and family living.

4. To recognise and make intelligent use of personal, family and community resources in achieving one's values and goals.

5. To understand the roles of family members in the family and in the society.

6. To express art in daily life.

7. To understand the satisfactions and responsibilities of marriage and parenthood and the need for preparation for assuming these roles.

8. To prepare for higher education in the field of home science.
**Scheme of examination:**

There will be three areas consisting of two papers in each. The titles of each paper and the allocation of marks to theory and practical examination will be as follows.

<table>
<thead>
<tr>
<th>Area</th>
<th>Paper</th>
<th>Title</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>Home management and human relationship</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Clothing and textiles</td>
<td>35</td>
</tr>
<tr>
<td>II</td>
<td>1</td>
<td>Child development</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Health science</td>
<td>35</td>
</tr>
<tr>
<td>III</td>
<td>1</td>
<td>Foods and nutrition</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Basic science</td>
<td>35</td>
</tr>
</tbody>
</table>

Note: Theory examination in each paper will be of three hours duration. There will be only one practical examination in each area having the duration of not more than four hours.

Board examination will be held at the end of XI class.

**Course outline**

Area I, Paper 1 - Home management: and human relationship

**Specific objectives:**

1. To develop an understanding of the principles of management.
2. To develop an understanding of basic human relationship.
3. To develop knowledge of family needs and ways to satisfy these needs.
4. To develop an understanding of selection of house and its cleanliness.
5. To develop an ability to select, use and care of household furnishings and furniture.

6. To recognise resources available for personnel and family use.

7. To develop an ability of arranging different rooms for effective use.

8. To develop an understanding of principles, use and care of various labour saving equipments in the home.

9. To develop knowledge of making family budgets and maintaining household accounts.

10. To develop an understanding of household purchasing.

11. To develop an understanding of the importance and ways of savings and investment.

12. To develop an awareness and appreciation for the duties and obligations of housewife in the family and the society.

13. To know the use of communication facilities for the family.

Class IX:

<table>
<thead>
<tr>
<th>Theory content</th>
<th>Practical/Related experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs:</td>
<td></td>
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<tr>
<td>1. Needs and interests of family members.</td>
<td></td>
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<tr>
<td>2. Satisfaction of these needs in the family.</td>
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<tr>
<td>Human Relations:</td>
<td></td>
</tr>
<tr>
<td>1. Study of some basic human relationships.</td>
<td></td>
</tr>
<tr>
<td>(a) Mother and child</td>
<td></td>
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<tr>
<td>(b) Brother and sister</td>
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</tr>
</tbody>
</table>
(c) Parents and adolescent.
(d) Housewife and servent.
(e) Friendship.
(f) Relation of individual with people in society, community and with neighbours.

Concept of management:

1. Meaning of management - Home management.
2. Processes of management - Planning, controlling and evaluation.
3. Goals, values and standards - their role and importance to family members.
4. Resources in the family - Human and nonhuman
5. Decision making processes related to the home and family.

Housing:

1. Difference between house and home.
   (a) House - Physical structural component
   (b) Home - Human element occupying house
2. Selection of site - Soil, locality, transportation facilities, lighting and water supply.
4. Selection and advantages of owned and rented house.

1. Visit to a house under construction.
### Theory content Practical/Related experiences

<table>
<thead>
<tr>
<th>Cleanliness of the house:</th>
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<tbody>
<tr>
<td>1. Every day cleaning, occasional cleaning and festival and seasonal cleaning</td>
</tr>
<tr>
<td>2. Cleaning different materials like - brass, silver, stainless steel, gold, copper, aluminium, glass, plastic and china.</td>
</tr>
<tr>
<td>Household pests:</td>
</tr>
<tr>
<td>1. Common household pests and insects - mosquito, fly, lizard, bed bug, cockroach, silverfish, ants and rat.</td>
</tr>
<tr>
<td>2. Prevention and control of these pests.</td>
</tr>
<tr>
<td>Selection of furniture:</td>
</tr>
<tr>
<td>1. Selection of furniture for different rooms of the house keeping in mind -</td>
</tr>
<tr>
<td>(a) Types of furniture, material and purpose.</td>
</tr>
<tr>
<td>(b) Family needs.</td>
</tr>
<tr>
<td>(c) Economic factors</td>
</tr>
<tr>
<td>1. Visiting a furniture shop.</td>
</tr>
<tr>
<td>Class X: Management of time and energy</td>
</tr>
<tr>
<td>1. Time and energy as resources, their availability and use</td>
</tr>
<tr>
<td>2. Division of labour among family members</td>
</tr>
<tr>
<td>3. Work simplification techniques</td>
</tr>
<tr>
<td>1. Experience in making time plans</td>
</tr>
<tr>
<td>2. Rearranging and reorganising kitchen and drawing room with a view to save steps &amp; control traffic lanes.</td>
</tr>
</tbody>
</table>
### Theory content

#### Planning a house

1. Space planning for different rooms keeping in mind the size of the family.
2. Qualities of a good constructed house - ventilation, plumbing and drainage and layout of the areas.
3. Best use of one room apartment for
   (a) Different activities
   (b) Storage planning

#### Use of art principles:

1. Meaning and elements of design - Line, form and colour.
2. Principles of design - Balance, proportion, emphasis, rhythm and harmony
3. Use of elements and principles of design in home decoration - for different sizes of rooms, seasons and activities.

#### Home furnishing:

1. Selection, use and care of the followings:
   (a) Furniture.
   (b) Floor coverings.
   (c) Curtains.
   (d) Accessories (other decorative articles)
2. Floor decoration - Alpana, rangoli and others.

### Practical/Related experiences

1. Visit two houses to study good or poor layout and conveniences.
2. Collecting pictures of rooms showing the use of art principles.
3. Making chart on colour schemes.
1. Home visit.
2. Shop visit.
3. Making Alpana and rangoli and other ways of floor decoration.
### Theory content

3. Flower arrangement - principles, types, for different rooms and occasions.

### Practical/Related experiences

3. Flower arrangement for different rooms and occasions.

#### Standard of living:

1. Meaning and importance
2. Factors that influence standard of living.
3. Ways of raising standard of living.

#### Budget and household accounts:

<table>
<thead>
<tr>
<th>Theory content</th>
<th>Practical/Related experiences</th>
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</thead>
<tbody>
<tr>
<td>1. Money as a resource</td>
<td>1. Preparing family budget for different income groups.</td>
</tr>
<tr>
<td>2. Meaning and importance of family budget.</td>
<td>2. Experience in keeping household accounts.</td>
</tr>
<tr>
<td>3. Factors influencing budget.</td>
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<tr>
<td>4. Steps in budget making.</td>
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<tr>
<td>5. Adjustments in the budget.</td>
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<tr>
<td>6. Checking budget in action.</td>
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<tr>
<td>7. Keeping household accounts</td>
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</table>

#### Savings and investment:

<table>
<thead>
<tr>
<th>Theory content</th>
<th>Practical/Related experiences</th>
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<tbody>
<tr>
<td>1. Meaning and importance.</td>
<td>1. Visit to bank and post-office</td>
</tr>
<tr>
<td>2. Evils of debt.</td>
<td>2. Use of cheque and draft.</td>
</tr>
<tr>
<td>3. Ways of saving - Bank, Post-office insurance and small saving schemes</td>
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</tbody>
</table>
Class XI

Housewife as manager:

1. Duties and responsibilities of housewife and other family members in the home and the community.

2. Management problems:
   (a) In joint and nuclear family.
   (b) Of working and nonworking married and or unmarried women.

3. Social obligations - entertaining guests, social visits and participation in social and religious functions, social manners.


Arrangement of different rooms for effective use:

1. Drawing room.
2. Bed room.
3. Dinning room.
4. Study room.
5. Kitchen and store room.

Time and labour saving equipment used in home:

1. Working principles, use and care of following equipment.
   (a) Cookers - Pressure cooker, Anand cooker and super cook (gas Tandoor)
   (b) Grinder, mixer and blender
   (c) Refrigerator
   (d) Oven, heater, and hot plate

1. Demonstration on various time and labour saving devices and wherever possible practice of handling these equipment.
<table>
<thead>
<tr>
<th>Theory content</th>
<th>Practical/Related experiences</th>
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<tbody>
<tr>
<td>(e) Toaster - electric and nonelectric</td>
<td></td>
</tr>
<tr>
<td>(f) Gysers and immersion rod</td>
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<tr>
<td>(g) Juicer, cutters, graters, knives, beaters and slicers.</td>
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<tr>
<td>(h) Washing machine.</td>
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<tr>
<td>(i) Electric irons.</td>
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<tr>
<td>(j) Hay box</td>
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**Table setting:**
1. Principles of table setting.
2. Table setting by different styles
3. Types of table setting - Formal, Informal and Buffet.

**Homemaker as buyer of consumer items:**
1. Planning purchasing.
2. Checking standard marks.
3. Checking bills.
4. Cooperative stores and ration shops.
5. Problems of consumer.
6. Consumer protection measures.
7. Advantages of cash, credit and installment purchasing.

**Use of communication services:**
1. Telegram, phonogram, Money order Registry, express letter, parcel, telephone and trunk call.
2. Planning household purchasing.
3. Practical experience in seeing various standard marks and checking bills.
4. Visit to cooperative store and ration shop.
5. Experience in
   (a) Filling money order forms.
   (b) Making parcels.
   (c) Telegram.
Area I, Paper 2 - Clothing and Textiles:

Specific objectives:

1. To develop an understanding of the need and importance of clothing for an individual and family.
2. To develop knowledge of the properties of textile fibres.
3. To develop an ability to use and care for sewing and laundry equipment.
4. To develop an ability to select suitable clothing for self and family members.
5. To develop an ability to construct different garment, for family members.
6. To develop an ability to take care of clothes.
7. To develop an appreciation for good personal appearance.

Class IX:

<table>
<thead>
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</table>

Need for clothing:

1. Protection, beauty and comfort.
2. Social and psychological need.

Textile fibres:

1. Classification: Vegetable, animal, man-made and others.

1. Showing actual samples of different textile fibres.
2. Studying the structure of fibres under microscope.
3. Demonstration of burning test to determine the physical properties of fibres.
Personal appearance:
1. Health and cleanliness.
2. Correct posture, effects of poor posture.
3. Care of nails, hair and skin.
4. Selection of proper dress and foot-ware.

Selection of clothes:
1. Factors influencing cloth selection: age, sex, complexion, occupation, climate and budget.
2. Line, print and colour in dress.
3. Advantages and disadvantages of purchasing ready-made garments.

Sewing:
1. Advantages of stitching clothes at home
2. Sewing equipment -
   (a) Sewing machine, working principles use, maintenance and small repairs.
   (b) Other equipment - needles, measuring tape, scissors, scale, tailoring chalk, pins, thimble, marking wheel, and others.
   (c) Knitting machine.

1. Demonstration on good and correct postures
2. Selection of appropriate line, print and colour in dress for different body builds and occasions.
3. Demonstration of various parts of sewing machine. Oiling, adjusting stitch tension and small repairs.
4. Demonstration on use of other sewing equipment.
4. Demonstration one use of knitting machine.
3. Some terms in sewing
   (a) Simple stitches - Basting, running stitch, back stitch and hemming.
   (b) Embroidery stitches.
   (c) Seams - Plain, French, overcasting.
   (d) Fasteners - hook, press button, button, buttonhole and hook eye.

4. Making samples of simple stitches, seams, button, button hole, and hook eye.

Taking body measurement:

1. Principles.
2. Taking measurements of different body parts.

Principles of clothing construction:

1. Making patterns
2. Preparation of cloth for cutting - shrinkage and pressing.
3. Placement of pattern on cloth.
5. Cutting and marking.
6. Drafting of jabla and jangia.
### Class X:

<table>
<thead>
<tr>
<th>Theory content</th>
<th>Practical/Related experiences</th>
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<tbody>
<tr>
<td><strong>Weaves:</strong></td>
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<tr>
<td>1. Study of basic weaves - Plain, basket, satin and twill</td>
<td>1. Showing samples of different weaves in fabrics. 2. Making samples of these weaves in paper.</td>
</tr>
<tr>
<td><strong>Finishes:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Importance of finishes.</td>
<td>1. Showing samples of fabrics having different finishes.</td>
</tr>
<tr>
<td>2. Study of common finishes - (a) Mechanical - calendering, tentaring and glazing (b) Chemical - sanforizing, mercerizing and crease resistance.</td>
<td></td>
</tr>
<tr>
<td><strong>Clothing construction:</strong></td>
<td>1. Cutting and sewing garments given in theory.</td>
</tr>
<tr>
<td>1. Drafting of Pajama, blouse, sari petticoat and frock.</td>
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<tr>
<td>2. Estimation of the total length of clothes required for given garment of different sizes.</td>
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<tr>
<td>3. Economical arrangement and laying out of the pattern on cloth.</td>
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<tr>
<td><strong>Care of clothing:</strong></td>
<td>1. Demonstration on use of laundry equipment.</td>
</tr>
<tr>
<td>1. Laundry equipment and their use.</td>
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<tr>
<td>2. Effect of hard water on washing.</td>
<td>2. Demonstration on home methods of softening water at home.</td>
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<tr>
<td>3. Simple methods of softening water at home.</td>
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<tr>
<td>4. Soap, and soap powders, liquid soap, detergents, blues, and starches used in laundry.</td>
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<td>Theory content</td>
<td>Practical/Related experiences</td>
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<td></td>
<td>5. Removing common stains on different fibres.</td>
</tr>
<tr>
<td><strong>Dyeing:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Principles.</td>
<td>1. Dyeing one garment in kachha and fast colour.</td>
</tr>
<tr>
<td>2. Different types of colours available for dyeing.</td>
<td></td>
</tr>
<tr>
<td><strong>Personal appearance:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Selection and use of cosmetics according to complexion, occasions and age.</td>
<td>1. Demonstration on use of different cosmetic.</td>
</tr>
<tr>
<td>2. Hair styles</td>
<td>2. Demonstration on hair styles for routine and special occasion suitable for adolescent girls.</td>
</tr>
<tr>
<td><strong>Storage of clothes:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Storage of garments made of different fibres.</td>
<td>1. Survey of methods used for cloth storage.</td>
</tr>
<tr>
<td>2. Ingredients used for storage of garments.</td>
<td>2. Showing the ingredients used for storage.</td>
</tr>
<tr>
<td>3. Storage of expensive, delicate and decorative garments.</td>
<td>3. Demonstration on how to store garments.</td>
</tr>
<tr>
<td><strong>Needle work:</strong></td>
<td></td>
</tr>
<tr>
<td>2. Preparation of one furnishing set by embroidery.</td>
<td>2. Making samples of one lace and one flower by crochet.</td>
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</tbody>
</table>
Theory content | Practical/Related experiences
---|---
3. Practice in using knitting machine.
4. Making any one set from the followings.
   (a) 6 Table mates.
   (b) Dressing table set.
   (c) Tea set.
   (d) Five cushions.
   (e) Sofa runners.
   (f) Four pillow covers.

Class XI:

Clothing construction:

1. Drafting- Shirt (boy's and girls), baba suit, salwar or bell bottom, kurta (Bengali).

Printing:

1. Block printing.
2. Fabric painting.
3. Batik, tie and dye.

Care of clothes (Laundry):

1. Preparation for washing - Sorting, mending and stain removal.
2. Washing - cotton (white and coloured), silk, wool and synthetic fabrics
3. Use of blue, starch and other whitening agent
4. Principles and method of ironing cotton, silk, wool and synthetic fibres.
Area II, Paper 1, Child development:

Specific objectives:

1. To develop an understanding of family relations.
2. To inculcate an understanding of prenatal, postnatal and infant care.
3. To develop apprehension of physical, social and emotional development of pre school children.
4. To develop an understanding of importance of pre-school education.
5. To develop knowledge of the growing process during adolescence.
6. To develop an understanding of adjustments in marriage.
7. To develop knowledge of importance and methods of family planning.

Class IX:

<table>
<thead>
<tr>
<th>Theory content</th>
<th>Practical/Related experiences</th>
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<tbody>
<tr>
<td>Prenatal life, birth and infant care:</td>
<td></td>
</tr>
<tr>
<td>1. Review of reproduction system, menstruation and conception.</td>
<td>1. Visit to a maternity home.</td>
</tr>
<tr>
<td>2. Pre-conceptional understanding and health of parents.</td>
<td>2. Visit to an antenatal centre.</td>
</tr>
<tr>
<td>3. Pregnancy-signs and discomforts.</td>
<td>3. Giving bath to a baby.</td>
</tr>
<tr>
<td>5. Preparation for the arrival of baby, child birth at home and hospital.</td>
<td>5. Preparing artificial feed for the baby.</td>
</tr>
<tr>
<td>Theory content</td>
<td>Practical/Related experiences</td>
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<tr>
<td>6. Postnatal care of the mother.</td>
<td>5. Cleaning the feeding bottles.</td>
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<tr>
<td>7. Care of new born baby.</td>
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<tr>
<td>8. Care of child during infancy—food, clothing, bathing, sleep, weaning, elimination and selection of toys</td>
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</tbody>
</table>

**Family:**

1. Meaning and functions

2. Advantages and disadvantages of joint, and single families.

**Class X:**

**Infant care:**

1. Minor ailments during infancy, preventive measures and vaccination

2. Causes of infant and maternal mortality in India and ways to prevent it.

**Preschool children:**

1. Importance of pre-school years.

2. Physical, social and emotional development.

3. Characteristics.

4. Play and its importance.

5. Selection of toys.

1. Preparing educational toys for pre-school children.

2. Observing social and emotional behaviour of children in nursery school.
Adolescents:
1. Physiological changes.
2. Problems during adolescence—physical, economic, social and emotional and their adjustment.

Marriage:
1. Functions.
2. Types—arranged, choice marriage—their advantages and disadvantages
3. Inter-caste marriage—merits and demerits.

Class XI:

Pre-school children:
1. Developing good habits.
3. Importance of pre-school education, selection of school for child, preparing the child for school.

Adolescents:
1. Interests and needs of developing positive heterosexual relationship.
2. Sex education—meaning and importance.
Marriage:
1. Marriage adjustments
   (a) Husband and wife relationship.
   (b) In-laws relationship.
   (c) Parent-child relationship.
   (d) Financial adjustments.

Family planning:
1. Meaning and importance of family planning.
2. Different methods for family planning.

Area II, Paper 2, Health Science:

Specific objectives:
1. To develop knowledge of the structure of human body.
2. To develop understanding of the structure and functioning of different systems in the body.
3. To develop comprehension of the importance of personal hygiene.
4. To develop an understanding of the relation of water, air and bacteria to health.
5. To develop knowledge of the common infectious diseases, their causes, prevention and treatment.
6. To develop an awareness of the health services available for family.

7. To develop an appreciation and understanding of the importance and services rendered for first-aid.

8. To develop an understanding of the importance of home nursing and providing good nursing to sick at home.

Class IX:

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**Introduction and cell physiology:**

1. Introduction to the subject physiology.

2. Structure of the cell and cell division.

**Tissues:**

1. Definition of tissue, basic types and classification.

2. Structure and functions in brief.

**The skeleton system:**

1. Functions.

2. Division and classification of Bones.

3. Characteristics of bone structure

**Joints:**

1. Classification of joints.

2. Functions of joints.
The muscular system:
1. Structure and types of muscles.
2. Functions of muscles.

Personal hygiene:
1. Healthy habits, cleanliness, exercise, fatigue, rest, sleep, diet and entertainment.

Water:
1. Composition, sources, impurities found and their effect on health.
2. Purification of water in the home and for a large supply.

Air:
1. Composition, properties, impurities found and their effect on health.
2. Ventilation.

First aid:
1. Meaning and importance
2. First-aid treatment in the followings:
   (a) Cuts, injuries and wound.
   (b) Haemorrhage.
   (c) Insect bite.
   (d) Shocks and electric shock.
   (e) Heat stroke.

1. Demonstration on different home methods of water purification.
2. Visit to water works.
1. Demonstration on how to deal with a person having injuries, bleeding, insect bite and shocks.
Home nursing:
1. Meaning and importance.
2. Qualities of a nurse - personal, health, dress, behaviour and knowledge.

Sick room:
1. Selection of room - ventilation and light, necessary furniture, equipment and other articles, sanitary conditions and size.
2. Preparation and arrangement of sick room.

Class X:
The Digestive system:
1. Purpose of digestion.
2. General anatomy of the digestive organs.
3. Process of digestion - passage of food through the digestive tract.
5. Functions of liver.
The Respiratory system:
1. Purpose of respiration.
3. Mechanism of breathing.
4. Good habits of respiration.
The circulatory system:
1. The blood—composition and functions, coagulation of blood.
2. Structure and functions of heart and blood vessels.
3. Regulation of blood supply.
4. Pulse rate, pressure point and blood pressure.

Bacteria:
1. General characteristics.
2. Conditions of life and growth.

Infection:
1. Meaning, sources, spread through direct contact, droplet infection, air, water, food, insect and carrier.
2. Prevention and check of infection.
3. Use of common disinfectants.
4. Immunisation.

First-aid treatment:
1. Drowning.
2. Fainting, convulsions and hysteria.
3. Burns
4. Fracture, sprain and dislocation.
Use of bandage and splints:

1. Kinds of bandages and their use.
2. Use of splints.

Care of sick:

2. Suitable clothing for the patient.
3. Sponge bath, changing the clothes.
4. Taking and recording temperature, respiration, and weight.
5. Administering medicines and food.
6. Disposal of dirty linen and other waste like stool, spit, etc.

Class XI:

Excretory system.

1. The organs of excretion.
2. Urinary system.
   (a) Anatomy of Urinary system.
   (b) The kidney function and structure.
4. Care of skin.
The nervous system:
1. Structure and functions of spinal cord and brain.
2. Reflex action.

The Endocrine system:
1. The important ductless glands of the body and their functions.

The reproductive system:
1. Structure and functions of male and female reproductive organs.
2. Physiology of menstruation, fertilisation and pregnancy.

Sensory organs:
1. Structure and functions of eye.
2. Structure and functions of ear.
3. Taste, smell and cutaneous sensations.

External remedies:
1. Poultices.
2. Fomentation - dry and wet.
3. Gargles, inhalation, putting eye, ear and nasal drops.

Infectious diseases:
1. Causes, mode of infection, symptoms, prevention and arrest of
   (a) Tuberculosis
   (b) Malaria

1. Use of bed pan, anima pan, kidney tray, hot water bottle, ice cap, suppository eye dropper and eye glass.
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<thead>
<tr>
<th>Theory content</th>
<th>Practical/Related experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) Influenza</td>
<td></td>
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<tr>
<td>(d) Typhoid.</td>
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<tr>
<td>(e) Measals and small pox.</td>
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<td>(f) Cholera.</td>
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</tbody>
</table>

**Home medicine chest:**

1. Common medicines, antiseptics and common instruments used for first-aid and home nursing.

1. Preparing a home medicine chest.

**Health services**

1. Health services available, dispensaries, hospital, sanitorium, homes for the cripples and asylums.

1. Visit to various health centres.

**Area III, Paper 1, Foods and nutrition:**

**Specific objectives:**

1. To develop an understanding of the importance and functions of foods.

2. To develop a knowledge of different nutrients, their source, functions and deficiency symptoms.

3. To develop an ability to plan and prepare diets for family and for special conditions.

4. To develop an ability to store and preserve foods.

5. To develop an awareness of food adulteration and measures to check it.

6. To develop knowledge of extension programmes.
### Class IX:

<table>
<thead>
<tr>
<th>Theory content</th>
<th>Practical/Related experiences</th>
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</thead>
<tbody>
<tr>
<td><strong>Introduction to foods:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Importance and functions of foods.</td>
<td>1. Demonstration on four food groups with the help of raw foods.</td>
</tr>
<tr>
<td>2. Classification of foods - energy foods, body building and protective foods.</td>
<td></td>
</tr>
<tr>
<td>3. Basic four food groups - cereals, protein foods, milk and milk products, vegetables and fruits.</td>
<td></td>
</tr>
<tr>
<td><strong>Nutrients:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Functions and sources of protein, carbohydrates, fats, vitamins, minerals and water. Calory as a measurement of energy.</td>
<td></td>
</tr>
<tr>
<td><strong>Cooking methods:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Reasons for cooking.</td>
<td>1. Demonstration on various cooking methods.</td>
</tr>
<tr>
<td>2. Effect of cooking on nutritive value.</td>
<td></td>
</tr>
<tr>
<td>3. Cooking methods: moist and dry heat-boiling, simmering, steaming, blanching, frying, baking and cooking under pressure.</td>
<td></td>
</tr>
<tr>
<td><strong>Study of foods:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Cereals - Nutritive value of rice, wheat, maize and other local millets. Ways of using wheat in diet- Whole, Dalia, Suji, flour and maida. Effects of milling and cooking methods on cereals.</td>
<td>1. Preparation of chapati, paratha (plain and stuffed) and puri.</td>
</tr>
<tr>
<td></td>
<td>2. Preparation of rice by different methods.</td>
</tr>
</tbody>
</table>
### Theory content


3. Vegetables - Classification - green leafy and yellow, root and other vegetables. Nutritive value of various groups, selection and storage, effects of preparation methods and cooking, importance and use of raw vegetables as salads.

4. Fruits: Nutritive value, selection and storage, importance and use of fruits in diet.

### Practical/Related experiences

3. Preparations of maize and other millets.

4. Cake and Biscuits.

5. Sweet and savoury preparation of cereals.


7. Preparation of pulses and cereals mixed.

8. Preparations of sprouted whole pulses.

9. Preparation and decoration of salads - vegetable, fruit, and mixed salads.

10. Demonstration on storage of fruits and vegetables.

### Class X:

#### Study of foods:

1. Milk and milk products - kinds and their nutritive value, pasteurisation, storage of milk and milk products, milk products used in cookery.


3. Setting curd preparing mava, butter and paneer.

4. Preparing raitas, kheer and Shrikhand.

5. Ice-creams and puddings.

6. Preparing recipes with flesh foods, at least one each from meat, fish, and poultry.
3. Eggs - nutritive value, selection and storage, effects of cooking, uses of egg in cooking as binding and foaming agent.


5. Fats and oils - kinds, importance and uses.

6. Beverages - Classification, nutritive value and role in diet.

7. Spices and condiments - uses in diet, disadvantages when used in excess.

Food adulteration:

1. Foods commonly adulterated.
2. Food adulterants.
3. Measures to check food adulteration.

Food preservation:

1. Reasons of food spoilage.
2. Principles and methods of food preservation - Blanching, dehydration, with salt, sugar, spices, oil and with chemicals, canning.
3. Preserving foods by dehydration, sugar-jams, jellies and syrups and squashes, and different pickles.
### Theory content | Practical/Related experiences
--- | ---
Fermentation:
1. Meaning and importance
2. Methods - by curd and yeast. | 1. Preparing two recipes of fermented foods such as idly, dosa dhokala etc.
Recommended daily allowances (By ICMR)
1. Recommended daily allowances for different groups - Children, adults (male and female) and during special conditions.
2. Effect of age, sex and occupation on recommended allowances.

Class XI:

**Nutritional deficiency:**
1. Deficiency symptoms of protein, calory, vitamins and minerals.
2. Study of some important deficiency diseases - kwashiorkar, marasmus, night blindness, p beri-beri, pellagra, scurvy, rickets and anemia.

**Meal planning:**
1. Definition of balanced diet, planning balanced diet with the help of four food groups.
2. Factors influencing meal planning - availability, socio-economic and cultural factors, age, sex, occupation and likings of family members.
<table>
<thead>
<tr>
<th>Theory content</th>
<th>Practical/Related experiences</th>
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</thead>
<tbody>
<tr>
<td>3. Planning diets for children (preschool and school going), adolescents, adult man and women, expectant mother, nursing mother and old age.</td>
<td>3. Planning diets for hard worker and mental worker.</td>
</tr>
<tr>
<td>4. Supplementary feeding for infant.</td>
<td>4. Planning and preparing supplementary foods for infant.</td>
</tr>
<tr>
<td><strong>Food for special occasions:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Factors in planning food, for special occasions- children's party, other parties and festivals.</td>
<td>1. Planning and preparing food for a party and a festival.</td>
</tr>
<tr>
<td>2. Arrangements and decoration</td>
<td></td>
</tr>
<tr>
<td><strong>Diet during diseases:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Types - liquid, semi-liquid and soft.</td>
<td>1. Planning and preparing diets for different diseases mentioned in theory.</td>
</tr>
<tr>
<td>2. Dietary requirement and planning diets for diseases - fevers, typhoid, dysentry, diarrhea, diabetes and for over weight and under weight.</td>
<td></td>
</tr>
<tr>
<td><strong>Food service:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Indian and western styles of food serving.</td>
<td>1. Serving food in different styles.</td>
</tr>
<tr>
<td>2. Table manners.</td>
<td></td>
</tr>
<tr>
<td><strong>Kitchen gardening:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Importance and planning.</td>
<td>1. Growing vegetables in kitchen garden.</td>
</tr>
</tbody>
</table>
Extension education:

1. Meaning and importance of extension education.
2. Extension work in home science.
3. Importance, functions and chief components of Applied Nutrition Programme.

Area III, Paper 2, Basic Sciences:

Specific objectives:

To develop a broad understanding of the principles of basic sciences namely chemistry, physics and biology as applicable to the field of home science.

Class IX:

Chemistry:

1. Importance of basic sciences to home science.
2. States of matter: solid, liquid and gas and their general properties.

1. Dissolving capacity of liquids
   (a) Preparation of common solutions.
   (b) Separation of mixtures by using common methods such as sublimation, crystallisation etc.
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>3. An elementary knowledge of elements, mixtures and compounds, classification of compound: acids, bases and salts.</td>
<td>2. Study of general properties of acids, bases and salts.</td>
</tr>
<tr>
<td>4. Language of chemistry: symbol, formula and chemical equation.</td>
<td>1. Showing at least one representative type under each category of plants and animals.</td>
</tr>
<tr>
<td>1. Definition and classification of biology.</td>
<td>1. Experimental determination of various measurements of similar objects.</td>
</tr>
<tr>
<td>2. Difference between living and non-livings.</td>
<td>2. Determination of density and relative density.</td>
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<tr>
<td>Physics:</td>
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</tr>
<tr>
<td>1. Introduction to physics</td>
<td></td>
</tr>
<tr>
<td>3. Measurements and units. Methods of measuring length, diameter of sphere and cylinder, area and volume.</td>
<td></td>
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<tr>
<td>4. An elementary knowledge of:</td>
<td></td>
</tr>
<tr>
<td>(a) Force, motion, atmospheric pressure and gas laws.</td>
<td></td>
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<tr>
<td>(b) Density, relative density and their measurement, Archimedes's principle</td>
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<tr>
<td>Theory content</td>
<td>Practical/Related experiences</td>
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<tr>
<td>5. Principles and functions of the following: lever, pulley, suction pump, water pump, thermosflask, lectometer, hydrometer, physical balance, spring balance, sringe and gas meter.</td>
<td>3. Study of system of pullies.</td>
</tr>
<tr>
<td></td>
<td>4. Use of lectometer, physical balance, spring balance and pumps.</td>
</tr>
</tbody>
</table>

**Class X:**

**Chemistry:**

1. Preparation, properties and uses of hydrogen, nitrogen (nitrogen cycle), oxygen, carbon dioxide and ammonia.
2. Properties and uses of carbon and sulphur.
3. Properties of acids and their uses in the home.
4. Properties of bases and their uses in home and in laundry.
5. Properties and uses of salts. Their harmful effect on metals. Inorganic salts and their importance in the human body.

**Biology:**

1. Common harmful household insects. Showing specimens of their characteristics and control measures.
Theory content          Practical/Related experiences

2. Life cycle of fly and mosquito.
3. Parts of a flowering plant: root, stem, leaf, fruit and seed, their structure, functions and modifications.
4. Elementary idea of pollination and fertilization in plants.

2. Use of common insecticides.
3. Study of a common flowering plant.
4. Showing the different modifications of various parts of plant.

Physics:

1. Effect of heat on various stages of matter.
4. Thermometers and their use.
5. Relative humidity and its importance.
6. Working of pressure cooker, refrigerator, air conditioner and radiators.
7. Laws of magnetism, mariner's compass.

1. Determination of melting and boiling points.
2. Determination of heat capacity and specific heat.
3. Determination of dew point.
4. Study the laws of magnetic attraction and repulsion.
5. Identification of magnetic and non-magnetic substances.

Class XI:

Chemistry:

1. Properties and uses of metal and alloys.
   (a) Aluminium, copper, iron, gold, silver, zinc and tin

1. To study the effect of acids and alkalis on different metals and alloys.
<table>
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<tbody>
<tr>
<td>(b) Bronze, brass, stainless still and german silver.</td>
<td>2. Preparing wall plates from plaster of paris.</td>
</tr>
<tr>
<td>2. Uses of the following compounds:</td>
<td></td>
</tr>
<tr>
<td>(a) Gastic soda, washing soda, cooking soda, baking powder, lime, ammonia, bleaching powder, potassium permagnate, copper sulphate, hydrogen peroxide, plaster of paris, oxalic acid, citric acid and tartaric acid.</td>
<td>3. Demonstration on preparation of match sticks.</td>
</tr>
<tr>
<td>(b) Preparation and uses of soap, match box, vinegar and glass.</td>
<td>4. Silvering of mirrors.</td>
</tr>
<tr>
<td>3. Difference in organic and inorganic compounds.</td>
<td>5. Identification of functional groups in the laboratory.</td>
</tr>
<tr>
<td>5. Different functional groups and their characteristics.</td>
<td></td>
</tr>
</tbody>
</table>

**Biology:**

1. Study of some common plants: pea, mustard, carrot, cucumber, potato, onion and other seasonal vegetables.
2. Broad understanding of various physiological processes in plants: photosynthesis, respiration, transpiration, growth and reproduction.
3. Elementary knowledge of principles of genetics.
1. Showing the specimens of plants mentioned in theory.
2. Demonstrate the various processes through simple experiments.
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<tr>
<td><strong>Physics:</strong></td>
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</tr>
<tr>
<td>1. Electricity: Ohm's law, volt, ampere, watt and kilowatt.</td>
<td>1. Determination of resistance.</td>
</tr>
<tr>
<td>2. General knowledge of electricity, essential to understand the working of the following:</td>
<td>2. Study of working of electric bell.</td>
</tr>
<tr>
<td>(a) Primary and secondary cells.</td>
<td>3. Setting fuses.</td>
</tr>
<tr>
<td>(b) Electric bell.</td>
<td>4. Demonstration on electroplating.</td>
</tr>
<tr>
<td>(c) Telephone.</td>
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<tr>
<td>(d) Electric appliances used in homes: heater, lamp, iron, fan etc.</td>
<td>5. Use of resonance column.</td>
</tr>
<tr>
<td>(e) Wiring and fuses.</td>
<td>6. Verification of laws of reflection and refraction.</td>
</tr>
<tr>
<td>3. Watt meter and calculations of electric bills.</td>
<td></td>
</tr>
<tr>
<td>4. Sound:</td>
<td></td>
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<tr>
<td>(a) Velocity and qualities</td>
<td></td>
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<tr>
<td>(b) Study of vibration of strings and air column to understand the principles underlying the musical instruments.</td>
<td></td>
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<tr>
<td>5. Light:</td>
<td></td>
</tr>
<tr>
<td>(a) Properties of light, formation of shadows and eclipses.</td>
<td></td>
</tr>
<tr>
<td>(b) Reflection and refraction</td>
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<tr>
<td>Theory content</td>
<td>Practical/Related experiences</td>
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<tr>
<td>(c) Mirrors and formation of images, use of different types of mirrors in the home.</td>
<td></td>
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<tr>
<td>(d) Lenses, types and formation of images.</td>
<td></td>
</tr>
<tr>
<td>(e) Uses of lenses - telescope, camera and binoculars.</td>
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<tr>
<td>(f) Defects of eye vision and their correction.</td>
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</tbody>
</table>