CHAPTER - III

CONTEMPORARY POSITION OF HOME SCIENCE CURRICULUM IN INDIA.

It may be commonplace to say that Home Science finds a place of importance in the present-day-curriculum of girls' education at almost all levels of education. This is another question as to how many of them really avail themselves of this provision. It is all the more important to note that more men are found to man the so-called careers belonging to Home Science viz. designing, tailoring, interior decoration, cooking and the like. This may seem rather paradoxical. Yet the fact remains that the world's best cooks are rather more men than women.

A. HOME SCIENCE IN SCHOOL EDUCATION.

Prima-facie all girls' schools offer courses or instruction in Home Science, in one form or the other, despite the fact that liberal or general education, particularly at school level, is not meant to distinguish between the education of boys and girls. The obvious orientation of girls to Home and Family from the very beginning of their education is perhaps because the family image is probably an inherent, built-in, unconscious characteristic of a woman - a product of the inevitable psycho-sexual development in a woman's life, which as a natural process begins early enough at the age of two or three years. This may
also be so because the significant influence of women is felt as nucleus of family life. Besides, women are the first teachers of children. Home Science in the form of domestic education, cooking, kitchen, gardening, sewing, needlework, personal hygiene and environmental cleanliness, healthy food habits, prevention and cure of diseases and epidemics, craftwork for home decoration, knowledge of diets and foods, etc., does find its place in the school curriculum for all, in addition to special elective courses for the interested girls.

For example, the curriculum of one of the Boards of Secondary Education indicates, which may be true with other Boards also, that Home Science/Domestic Science is taught under three groups viz., as compulsory subject under Arts and Crafts, as optional subject under Humanities, and as a special Home Science Group. Tailoring, Domestic Science, and Embroidery and Needle Work form the three crafts related to Home Science under the compulsory group of subjects. Syllabus prescribed under these crafts and under Humanities and special group is as follows:

Group I: Home Science under Arts & Crafts:

(i) TAILORING Class IX

1. Revision of the work done in Classes VI, VII and VIII.

2. Ibid (p.31-32).
2. Knowledge about the garments used by different persons in different parts of India, such as Lucknowi Kurta, Pyjama, Salwar, Kamiz, Bengali Kurta, Lungis.

3. How to measure for the various garments and to calculate the quantity of material required of different width.

4. The study of sewing machine, how to oil, clean and set the parts right.

5. Cutting and stitching by hand and sewing by machine, the following garments:
   - Chaddi-Pyjamas (ordinary), Kurta (gents), Shirts, Blouse, Petticoat.

6. Mending of clothes such as darning and patch work.

Class X

The theory paper shall comprise the knowledge of the following:

1. Principles and recording measurements.

2. How to measure for the various garments and calculate the quantity of materials of different width for shirt, pyjama, salwar, kurtas.

3. Use of different kinds of hand stitches such as hem stitch, back stitch, running stitch and button hole stitch.
4. Specification of the different kinds of cloth for different garments according to age and season.

5. The study of the various parts of sewing machine, how to oil, clean and set the parts right.

6. The Principles of cutting and stitching the following garments:
   - Chaddi, Pyjama (4 varieties i.e., 2 for ladies and 2 for gents), Kurta, Shirts (Half sleeves and full sleeves), Halfpant, Manila Shirt, Lehanga, Frock, Blouse, Kurta (Ladies).

PRACTICAL

1. Cutting and finishing of all the garments mentioned in the theoretical course by machine or hand stitches.

2. Practical knowledge of all kinds of hand stitches and efficiency to do them easily such as running stitches, hem stitches, back stitches and button hole stitches.

3. Mending of clothes such as darning (round and rectangular holes torn slits round, rectangular, triangular or plain, lined clothes).

4. Modification, conversion and adaptation of torn shrunken garments into suitable ones.
DOMESTIC SCIENCE

Classes IX & X

Theory

Introductory-

The objects of teaching the subjects -

(a) To make the domestic duties easy, interesting and efficient.

(b) To provide more leisure for the members of the family so that they can follow their pursuits and interests regularly.

(c) To help make home a pleasant and beautiful place.

(d) To improve the health of the members of the family.

(e) To raise the standard of living.

Hygiene-

(a) Personal hygiene-

Health habits and their importance, Cleanliness of the body, (hair, nails, teeth, skin etc.) and clothing; Need and importance of work (occupation); exercise, rest, recreation and sleep; Importance of temperance in smoking, alcoholic drinks, use of tobacco, opium, ganja and other narcotic drugs.

3. Ibid (p. 48-53).
(b) Air -

Composition of air, ventilation, importance of pure air, impurities found in the air, effects of living in ill-ventilated and crowded places.

(c) Water -

Composition of water; hard and soft water; sources of water supply; how water gets polluted; how to prevent such pollution; purification of water for domestic purposes and for distribution in the city.

(d) Food -

Needs of the body and hence the constituents of food; classification of food—(a) Body building, (b) Energy giving, (c) Protective, and (d) Regulatory; importance and source of chief constituents; balanced diet, effects of unbalanced diet; or common deficiency diseases and their prevention.

(e) Infectious diseases -

Meaning of infection and the modes of infections with common examples; precautions and preventions for the check of infectious diseases.

Home Nursing -

(a) Sick room -

Bed, bedding, furniture, light, warmth, ventilation.
(b) Nurse—

Qualifications, desirable qualities; health, dress; attitude towards the patient, invalid and others.

(c) Duties—

Administration of medicines; pulse and respiration readings, temperature charts; sponging and bathing of the patients and changing garments; bed making, changing of sheets and draw sheets; reporting to the doctor, controlling visitors, use and care of thermometer, syringe, eye glass, spitoon, bed pan, hot water bottle, ice bag and weighing machine etc. Precautions during infectious illness, disinfection and disinfectants, visitors, occupation during convalescence.

Physiology—

Elementary knowledge of the general structure and the working of the human body. Structure and functions of the following systems in brief:—

(a) Skeleton system,
(b) Muscular system,
(c) Digestive system,
(d) Circulatory system,
(e) Respiratory system,
(f) Excretory system,
(g) Nervous system.
First Aid—

How to stop bleeding, how to treat for burns and scalds, what first aid to be given for sprains, dislocations and fractures; what to do in case of fainting, sunstroke, hysteria, foreign bodies in the eye, ear, nose and throat; stings (wasp, scorpion etc.); and bites (snakes, dogs etc.)

Methods and practice in the ordinary simple bandages in connection with the course indicated above.

Household Management—

(a) The house—

(a) Locality with respect to hygienic surroundings accessibility and desirable place; desirable neighbours;

(b) Ventilation and sanitation;

(c) Convenience and comfort with respect to accommodation, safety and security;

(d) Cleaning, care and maintenance of the house, furniture and other articles in the house;

(e) Disposal of refuse;

(f) Precautions to check pests such as mosquitoes, flies, bed bugs, rats, etc.
(a) Store Room—Storage of the provisions and preserved articles.

(h) Convenient arrangements and decorations;

(i) Domestic economy of time, energy, and money.

(b) Cookery—

(a) Principles of cooking methods of cooking;
   How to retain the food values;

(b) Preparation, care and serving of the following groups of preparation—

Grp. I: Roti, Paratha, Puri, Dal, Rice,
   Pulao, Green vegetables (leaf and fruit), Raita.

Grp. II: Pakora, Mathri, Kachori, Samosa & Dahi Bara.

Grp. III: Kheer, Halva (Suji, Atta and Carrot),
   Guinjia, Barfi (only 2 simple kinds).

Note—Where necessary, preparations of eggs, fish and meat dishes be included or substituted instead of Group I.

(c) Invalid Cookery—Barley water; soups; (vegetable; tomato, dal) fruit juices; sago and dal; khichri;
   steamed vegetables; half-boiled eggs, whey water and tea.

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(c) Duties of the mistress of the house-hold-

Distribution of the work among the members of the house-hold; programme of work allowing leisure; proper use of the leisure; serving of food (Indian and Western style), Table setting; hostess and hospitality; preparation of the budget and keeping the accounts; postal information (letters and their clearance, delivery, money orders, telegrams, Parcels; Elementary knowledge about books and the ordinary accounts; how to deposit and withdraw money; post office savings accounts; National savings schemes).

(d) Laundry-

1. Washing, starching and ironing of cotton, woolen and silken clothes including laced and embroidered clothes.

2. Removal of different kinds of stains such as ink, pen, tea, vegetables, grease, mud, paint and varnish.

(e) Sewing-

(a) Chaddi, frocks, blouse, petti-coat, pyjama and kurta;

(b) Mending of torn clothes.

Practicals-

1. All the work mentioned under Home Nursing.
2. All the work mentioned under First Aid.
3. Jobs mentioned under House-hold management.
4. Preparation and serving of foods mentioned under cookery.
5. Practice in budgets, keeping accounts, post office and bank dealings.

6. All jobs mentioned under Laundry.

7. Cutting and sewing of the garments mentioned under sewing.

(iii) EMBROIDERY AND NEEDLE WORK

Theory and Technique

1. The needle-woman's equipment—Needle work equipment and dress-making equipment.

2. Plain needle work—different kinds of tailoring stitches, such as hem, back stitch, seams, buttonholes, French seam etc., and embroidery stitches (mentioned under practical) and their proper use.

3. How to use a sewing machine, how to use simple attachments (for binding, fine edgeheave, gather, pleads etc.) how to look after the machine, oiling and cleaning and how to set the parts right for common disorders.

4. Drawing and Designing—
   (a) Simple decorative design for embroidery purposes suitable for different articles.
   (b) Enlarging and transferring of designs.
   (c) Preparation of patterns for applique and patch work.
   (d) Designs for cross stitch—how to copy, enlarge and prepare.

5. Using up of odds and ends (making dolls, table cloths, tray cloth, hand bag, purses etc. and designing them
6. Principles of washing and ironing cotton (white and coloured, fast and non-fast), woolen, silk, embroidered and laced articles.


Practical

1. Practical knowledge of the different kinds of stitches used in tailoring.

2. Mending of clothes-darning, (holes of different shapes on coarse and fine materials) patching (on white coloured, lined, flowered cloth, wool & lace), French seams.

3. Embroidery work-
   (a) Practice and proper use of the various kinds of stitches used in embroidery work-long and short stitch, stem stitch, cross stitch, lacy daisy stitch, blanket stitch, feather stitch, fishbone stitch, French knots, gurumucha (Sindhi stitch) etc.
   (b) Cut-work designs.
   (c) Applique and patch work designs.
   (d) Salma Sitara work.
   (e) Mirror work.

4. Ibid, p.54-55.
(f) Bead work.
(g) Katori work.
(h) Gata work.

4. **Knitting**—
   Sweaters, baby suits, socks on two and four needles, mittens, frock or baby jacket.

5. **Crochet work**—
   Laces, insertion, corners, edgings, etc.

6. **Preparation of useful articles such as Tea-Cosy, lamp shade, hand bags, ladies evening purse, doilies etc.**

**Group II: Home Science as an Optional Subject**

**Class IX**

**Hygiene**—

(a) **Personal Hygiene**—

Health habits (how to cultivate them) and their importance; cleanliness of the body in the general and each part that needs special care and attention; clothing as regards its suitability, convenience and cleanliness; Importance of work(occupation), rest, exercise, recreation and sleep, Bad effects of alcoholic substances and drinks.

5 Ibid, pp.110-118.
(b) Air:
Composition, impurities present in the air, ventilation, Importance of pure air, effects of living in ill-ventilated and crowded places; air as a carrier of diseases.

(c) Water:
Composition; hard and soft water; impurities in the water and their sources, sources of water supply; how water gets polluted at the source; prevention of pollution; methods of purifying water for domestic purposes and for distribution in the city.

(d) Food:
Food needs of the body; important constituents to be present; their sources and importance; balanced diet, common deficiencies, diseases and dietic therapy; classification of food substances (body building, energy giving, protective and regulatory) and their needs according to age, occupation, state of health and sex etc.

(e) Diseases:
Infection and modes of infection; common infectious diseases (measles, chicken pox, small pox, cold, influenza, Pneumonia, diphtheria, cough, whooping cough, tuberculosis, mumps, typhoid, dysentery, diarrhoea, cholera, plague, malaria, skin diseases, eye sore etc.).
(f) Home Nursing:
(every work to be done practically)

1. External remedies—poultice, plasters and fomentations.
2. Sick room—choice and arrangements in the room; administration of medicines; pulse, temperature and respiration to be recorded on charts, reports for the doctor, sponging and bathing, changing of clothes; making the bed; changing sheets and draw sheets; knowledge and ability to use a thermometer, syringe, eye-glass, medicines glass, spitoon, bedpan, hot water bottles, ice bag, inhaler, weighing machine etc.
3. Infectious illness—Precaution, use of disinfectants, disinfecting the utensils, clothes, bedding room etc., visitors and their check; occupation during convalescence.
4. Principles and methods of serving food to the sick and invalid.
5. The nurse—her qualities and qualification, dress (neat and convenient); attitude towards the patient.

Household Management:

(A) The House:
(a) Locality with respect to hygienic surroundings distance from desired places of purpose; desirable neighbours;
(b) Ventilation and sanitation;
(c) Convenience and comfort with respect to accommodation, safety and security.

(d) Cleaning, care and maintenance of the house, furniture and equipment in the house.

(e) Disposal of refuse.

(B) Cookery:

(a) Principles of cooking and methods of cooking; retention of food values; vegetable salads to balance the meals or diets.

(b) Preparation, care and serving of the following groups of preparation:

Group 1. Chapati, Paratha, Puri, Rice, Dal, Pulao, Green vegetables (leafy and others), Raita.

Group 2. Pakora, Mathri, Kachori, Chats.

Group 3. Kheer, Halwa (Suji, Atta, Carrot.)

Note: Where necessary preparations of eggs, fish, meat dishes to be included or substituted instead of group 1.

(C) Laundry:

Washing, starching and ironing of cotton clothes, white and coloured; care and precautions regarding colours (fast and non-fast); washing of silk garments & ironing them.
Foods:
Preparing menus for different meals and balancing them.
Preparation of the following:-
Grp.1 Steamed rice, fried rice, stuffed parathas, pulao of different kinds.
Grp.2 Samosa, Dahi bada...
Grp.3 Halwas (Cucumber, pumpkin etc.,) gunjiya, barfi (2 or 3 simple kinds).
Invalid cookery: Soup (vegetable, tomato, Dal); fruit juices, khichri, Dalya & sago (with and without milk) whey water, steamed vegetables, half boiled egg, poached egg.

Duties of the Mistress of the household:-
Distribution of work among the members of the family; programme of work; occupation for leisure serving of food (Indian & Western); table setting, hostess & hospitality; planning the budget; keeping of accounts; postal information (letters, money orders, telegrams, parcels etc.), knowledge about the bank dealings; how to deposit and withdraw money; post office saving accounts; National Savings Scheme.

Sewing:-
(a) Cutting and stitching the following:-
Chaddi or Janghiya; frocks, petti-coats.
(b) Mending of torn clothes;
(c) Knitting socks (on 2 and 4 needles) and sweaters in simple design.

(d) Embroidery-Use of common easy stitches to embroider suitable designs on table cloths, pillow cases and children's garments etc.

Practical

1. All the jobs mentioned under Home Nursing.
2. All jobs mentioned under house-hold management.
3. Preparation and serving of foods mentioned under cookery.
4. All jobs mentioned under laudry.
5. Cutting and Seving of all garments mentioned under sewing.
6. Specimens of articles mentioned under knitting, embroidery and mending.

Class X

Physiology:-

Elementary knowledge of the human body, anatomy and the functions of the following systems in brief:-

(a) Skeleton system
(b) Muscular system
(c) Digestive system
(d) Respiratory system
(e) Circulatory system
(f) Excretory system (skin & kidney)
(g) Nervous system
(h) Reproductive system
First Aids—

Bleeding of different kinds; how to stop bleeding (pressure points and tourniquets); Treatment in cases of burns, scalds, bruises, sprains, dislocations, fractures; First aid to be rendered in case of fainting, hysteria, sun stroke, foreign body in eye, ear, nose or throat; in case of bites (snake, dog etc); stings (wasps, bees, scorpions etc);

Simple bandages needed while attending to the above emergencies.

Household management—

(A) House:

(a) Construction and materials used.

(b) Allotment of rooms and various arrangements possible in case of shortage in the number of rooms required.

(c) Household pests and how to check them.

(d) Household pets and domestic animals and how to take care of them.

(e) Store Room—Storage of provisions and preserved foods.

(f) Convenient Arrangements in each room and decoration.

(g) Domestic economy in time, energy & money.

Laundry:—

Washing and pressing of woolens, Washing and ironing of laces & embroidered articles; Removal of stains (grease, vegetable stains, ink, jodine, blood, pan, tea, paint and varnish, mud etc.)
Sewing:-

(a) Cutting & sewing of the following garments:
   - Blouse; Pyjama & Kurta;
(b) Knitting: baby sets, bonnets, sweater with full sleeves;
(c) Embroidery: Cross stitch designs suitable for table cloths and designs in garments.
(d) Crochet work - Edgings, laces and insertion.

Practicals:

1. All jobs mentioned under first aid.
2. Practice in jobs mentioned under household management.
3. Cooking & serving foods mentioned in the course.
4. Planning the programme for the day, budgets, practice in the post office and bank dealings.
5. All jobs mentioned under laundry.
6. Cutting and sewing of garments mentioned under sewing.
7. Specimens of articles mentioned under knitting, embroidery and crochet works.

GROUP III: HOME SCIENCE AS SPECIAL SUBJECT:

   Textiles, Clothing and Laundry.
   Class IX, Theory
   (Home Management and Human Relationship)

6 Ibid. P. 142-154.
1. Human needs—Family as satisfying the human needs—Advantages and disadvantages of the joint family system.

2. Relationship of the Individual, Society, neighbours, cinema, picnics and parties.

3. Importance and use of recreation clubs, libraries, cinema, picnics and parties.

4. Home and House furnishing—Choice of the house, surroundings, cleanliness of the home, furniture and utensils, Arrangements of rooms, Exterior and interior Decoration; Daily, Weekly and Seasonal cleaning; Disposal of refuse; the different methods of disposal convenient to the conditions in villages and towns, Check and destruction of household pests.

Clothing and Textiles:


2. Selection of materials with appropriate colour and design.

3. Selection of materials to suit climatic conditions.


5. Softening of water.

6. Principles of measurements and maintaining their records.

7. Drafting according to measurement of jhabla, chaddi of jangia, frock and patti-coat (for frocks).
Practicals

1. Study of different fabrics.
2. Softening of water.
3. Cutting and sewing of garments mentioned under theory.
4. Cleaning of rooms and articles.
5. Interior decoration—wall, floor, windows, flower vase arrangement practice.
6. Washing of cotton and linen garments (white & coloured).

Class X

Theory

Home Management and Human Relationship—

1. Consumption—Wants—Necessities; Standard of life and living; Preparation of the family budget and keeping in the various accounts.
2. Factors of economy in daily life—Purchase of household supplies—Other general expenses.
3. Obligations of the members of the family to each other in the family and the attitude and approach of the mistress of the house.
4. Planning and distribution of household duties for women who stay at home and those who are employed in different offices and institutions—Care of the aged infants—Management of the servants—Rearing and care of pets.
5. Duties of the hostess—Serving of food—Decoration and setting of the dining table—Simple and proper decoration of the various rooms—Etiquette and Hospitality.
6. Post, telegraph and telephone and Railway informations.
7. Savings, investments, insurance, banks—different kinds of accounts and their facilities.

Clothings:—

1. Clothing in relation to climatic and temperature changes.
2. Parts of the sewing machine—The Principles of working the machine—how to clean and take care of the machine.
3. Taking measurements and drafting salwar, kameez, blouse, choli, sari-petticoat, pyjama.
5. Principles of washing, boiling, rising, blueing, starching and ironing.

Practicals

1. Visits to Post Office, telephone exchange, banks etc.
2. Cutting & sewing of garments mentioned under theory.
3. Removal of stains—vegetable stains, animal stains and chemical stains.
4. Washing, blueing, starching and ironing of different kinds of garments made of different fabrics.
5. Starching for different stiffness.
6. Washing of wool, silk and man-made fibres.
Paper II: Foods and Nutrition

Class IX

Theory

1. Food-its importance and need.
2. Physiological classification of food:
   (a) Body building foods; (b) Energy giving foods;
   (c) Protective foods; and (d) Regulative food.
3. Constituents of food-Protein—Carbohydrates—fats—
   minerals—salts—vitamins—water and roughage; their
   sources and place in the food.
4. Reasons for cooking; effects of cooking; principles
   and methods of cooking;
5. Value of raw foods and salads in the menu,
6. Store Room: Convenient arrangements, preventing
   pests.

Practical:

1. Preparation of food and to demonstrate the different
   methods of cooking,
2. Preparation of Rice, Dal, Vegetables, Puri, Paratha,
   Khichri, Bhujia, Halwa, Kheer.
3. Survey of the different foods and vegetables accord-
   ing to the season,

Note:- Egg, Fish and Meat preparation to be included where
necessary.
Class X. Theory:

1. Kitchens—Aspect, flooring, arrangements and facilities in a good kitchen; safety in the kitchen; Common essential utensils—their use and care; Different kinds of cookers and fuels.

2. Balanced diet and planning, balanced diets for persons of different ages and occupation.

3. Daily means for a family and the consideration needed therein.

4. Cleanliness of food, handling of food while preparing, cooking, storing and serving.

5. Fruits—their values, importance, place and use in diet.

6. Malnutrition—its effects; deficiency diseases—their causes, symptoms and dietetical cures and remedies.

7. Use and care of some modern convenient labour saving gadgets for the kitchen e.g. Toasters, cutters, slicers, whisks, squeezers, Shapers, Grinding machine etc.

8. Purchase and storage of food stuffs—Perishable and non-perishable; causes of deterioration and methods of prevention of decay and deterioration.


Practicals

1. Cleaning of utensils, equipments and floor—use of suitable abrasives.

2. Preparation of Tea, Coffee and other drinks such as Lassi, Sikanji, fruit juices, milk shakes, fruitcock-tails etc.
3. Planning, cooking and serving of balanced meals for people of different occupation and ages.

4. Preparation of Parathas, Pulaos, Meethe Chawal, different kinds of vegetables (fried, stuffed, steamed etc.) Kachori, Mathri, Samosa, Sev, Dahibada, Sandwiches, Barfis, Halvas of different kinds, Gulab Jamun, Laddu.

5. Invalid foods and beverages-Dalia, Sago, Suji, steamed vegetables, Khichri, barley water, whey etc.

6. Salads (food supplement and table decoration)

7. Puddings, Cup-Cakes, Custards, jellies, Phirni and simple egg preparations.

8. Serving food in Indian and Western styles—arrangements and etiquette.

Note:- Egg, fish and meat preparations be included when necessary.

Paper III: Physiology, Hygiene, First Aid & Home Nursing:

Class IX

Theory

Section A – Physiology, Health & Hygiene:

1. Personal health—health habits; cleanliness, occupation; exercise; rest; recreation; Fatigue and sleep.

2. The cells, tissues, organs and systems.

Elementary and essential points of study of the systems.

(a) Skeleton system: Functions of the skeleton. Main bones of the body; peculiarities of children's bones.

(b) Muscular system: kinds: actions of the body muscles, muscles of the heart.

(c) Joints: Types: construction; general nature of a movable joint.

(d) Digestive System: Organs; mastication, swallowing; peristalsis; digestion; absorption, defecation;

(i) Teeth: Structure, care and prevention of decay.

(ii) Avoidance of over-eating and abuse of tea, coffee and alcohol.

(iii) Digestive disorders (indigestion, constipation) and their prevention and remedies.

(e) Respiratory system:

(i) Organs; mechanism of breathing and the movements that help in breathing; inspiration and expiration; capacity of the lungs;

(ii) Composition and properties of air;

(iii) Impurities in the air and their ill-effects on health.

(iv) Formation of proper breathing habits—Importance of correct posture, loose clothes.

(v) Ill effects of breathing through the mouth.

(vi) Ventilation—natural and artificial—Bad effects of living in ill-ventilated and crowded places.
5. Water: Composition, sources of water supply; impurities found in water; their sources and effects; hard and soft water; how to soften water; methods of purification of water for domestic purposes and supply in the city.

6. Bacteria: General Characteristics—beneficial and harmful bacteria; conditions that favour their growth.

7. Infection: Sources of infection—methods of transmission of infection such as direct contact, droplet infection; air, water, food, insect and animal bites; immunity; how to check and prevent infections; study of common infectious diseases; use of dis-infectants.

Class IX

Section B: Home Nursing & First Aid

1. The Nurse—Essential qualities and qualifications; health, dress; attitude towards patients.

2. Care in Nursing—Proper handling; protection against infection; use of dis-infectants.

3. Sick Room—Location, ventilation, lighting, cheerful appearance, necessary furniture and their positions; other equipment for the sick room.

4. Bed & body linen—Making the bed; changing sheets; makintosh and draw sheets; suitable garment for the Patients; bathing, sponging and changing the garments of the Patients; hair dressing of the patient, disposal of washing of dirty linen & used linen (dis-infection before washing).
Practicals

1. Visits to Hospitals, Schools, Municipal water storage stations.

2. Arranging a sick room.

3. Practical use of medicine glass, eye glass, eye droppers, bed pan, urinal, kidney tray, spittoon, hot water bottles, ice bag.

4. External remedies-poultices, fomentations, plasters.

Class X

Section 'A'

Physiology, Hygiene, First Aid & Home Nursing:


2. Lymphatic System-
The formation of tissue fluid and lymph-structure and functions to the lymphatic system.

3. Spleen:
Structure and function.

4. Liver:
Structure and function.
5. Excretory system:

(a) Skin: Structure and function. Sweat glands, body temperature, Regulation of body temperature, cleanliness of the skin and its care; skin parasites and diseases caused by them; infections of the skin how to prevent them.

(b) Urinary System: Kidney, Ureter, bladder, formation of urine-its composition and quality.

6. Nervous system:

(i) Central nervous system: Brains and spinal cord; Nerves-Sensory and motor; cranial nerves; Reflex actions.

(ii) Autonomic nervous system: Sympathetic and parasympathetic.

(iii) Sensations:

7. Infectious diseases:

Causes, symptoms, modes of infection, prevention and arrest of the following:--

1. Typhoid groups, fevers, cholera, dysentry, diarrhoea

2. Measles, Chicken pox, Small pox.

3. Cold, Influenza, Pneumonia, Diphtheria, Whooping cough and Tuberculosis.

Section 'G'

First Aid and Home Nursing:

1. Hot & cold sponge bath.
2. Inhalations; eye, ear and nose drops.
3. Prevention and treatment for bed sores, inflammations, boils etc.
4. Special precautions and Nursing the infectious diseases.
5. Disinfection and disposal of the patients' stool, sputum, soiled dressings, vomit and other discharges.
6. Household medicine chest.
7. Charts and posters on health and diseases.
8. First Aid Treatment for cuts and wounds, haemorrhage, sprain, fracture, dislocation, bites and stings.
9. First Aid in cases of drowning, fire burns, heat strokes, fainting, fits and convulsions, hysteria, electric shock, common poisons.
10. First Aid Box.

PRACTICALS

1. Visit to isolation hospitals and wards.
2. Sponging and bathing.
3. Disinfection of sick room and patient's clothes and utensils.
4. First Aid practice.
5. Practice in bandages necessary for the first aid and dressing of the courses mentioned under theory.
6. Pressure points; stoppage of bleeding in case of wounds.
A.I. Home Science Under the New School Pattern:

The new pattern of school education envisages education through the medium of environment. Every subject has to be taught in relevance to the immediate environment in which the child is being brought up. The child is gradually to be exposed to the world of work by the time he/she reaches the tenth year of schooling.

The new pattern suggests the following areas of school work:

Classes I and II

1. First language
2. Mathematics
3. Environmental studies (social and general science)
4. Work experience and the arts
5. Health education and games

Classes III, IV and V

1. First language
2. Mathematics
3. Environmental studies I (social studies)
4. Environmental studies II (general science)
5. Work experience and the arts

Classes VI, VII and VIII

1. The first language continues and a second is added (Hindi or English)
2. Mathematics (including algebra and geometry)
3. Social science (elements of history, geography, civics, economics)
4. Science (elements of the physical sciences and the life sciences)
5. The arts
6. Work experience

Classes IX and X

1. The first and second language continue and a third is added (English or any other Indian language).
2. Mathematics (including algebra and geometry)
3. Social sciences (history, geography, civics, economics, psychology)
4. Science (the physical sciences and the life sciences)
5. The arts
6. Work experience

This would indicate at least three possibilities under which Home Science could be studied. These are (i) Environmental Studies/science and social science, (ii) Work Experience and Arts, and (iii) Health Education. A glance at the following
curriculum* might help us understand the place of Home Science under the new pattern. It indicates that various aspects of Home Science are available under the following courses:

(a) **Life Sciences:** particularly the unit on Nutrition.

(b) **Work Experience in:**
   i) Horticulture (Pot culture, Kitchen gardening and ornamental gardening).
   ii) Bakery and Confectionery.
   iii) Designing, Dyeing & Printing.
   iv) Meal/Preparation and Preservation:
   v) Tailoring and Embroidery.
   vi) Maintenance and Repair of Household gadgets.
   vii) Nursing.

(c) **Physical and Health Education**

   Obviously, the new curriculum proposes to offer a sort of common course for all children upto Class X. The most immediate teacher of the child is the home and family environment, the understanding of which is rather the most fundamental aspect of the new approach. It involves a healthier cooperation among Home, School and Society to make the new pattern successful. The importance of Home Science under the new courses 'Environmental Studies I and II' cannot be set aside; it ought to form an integral part of both the physical as well as the social environment, including the awareness

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* Central Board of Secondary Education, Syllabi & Courses, for All Indian Secondary School Examination, 1977 (Class IX and X under the 10+2 pattern), New Delhi, Rs. 450 pp. 172.
and use of scientific and technological gadgets and equipments in home and outside. But the fact remains that Home Science as a subject has not received its due under the C.B.S.E. new curriculum mentioned above. It has received only partial treatment and a number of vital aspects of this subject do not find any place in the new course. For example, the new curriculum does not contain aspects like Mother craft and child care, textiles and clothing, Human Relationships, Laundry, etc. Even Home Nursing has remained at a too general level in the syllabus prescribed for Nursing. The inclusion of Home Science, not as a subject, but only as different activities in a few aspects of Home Science has made its place only lopsided in the new curriculum. This may mean devaluation of the traditional place of Home Science as a school subject, particularly for girls. This may become self-evident if we glance through the details of the Home Science aspects in the new course for classes IX and X. As already stated certain aspects of Home Science are available in the new curriculum under three categories viz.

some portion of the paper on Life Sciences, practical activities in the form work experiences in certain trades and areas, and the paper on Health Education. The details are:

GROUP A: Science

LIFE SCIENCES PAPER

UNIT VII: (20 period out of 120 on the whole paper) - (The first six units include general course in Biology).

1. Nutrition needs for growth and development.
(a) Concept of adequate nutrition in (i) Body building (ii) energy producing and (iii) protective foods.

(b) The Nutrition-Functions of nutrition, deficiency diseases caused and retardation of physical, mental growth, sources of nutrients.

(c) Requirement according to age, sex, occupations, pregnancy, improvement of the existing diets, correct choice of food with special emphasis on nutritional values and cost Development of desirable food habits.

2. Environmental factors affecting health.

   (a) Food hygienic and food sanitation

   (b) Common factors in food adulteration and sources and types of adulteration, effects of adulteration on health.

   (c) Food storage and preservation.

3. Human reproduction with special reference to population education.

Experiments:

   (i) Testing of food for its components.

   (ii) Tests for adulteration of ghee, spices, oil.

   (iii) Identification of several nutritional deficiency characters.
GROUP B: Work Experiences:

(i) Horticulture 9

(Pot culture, Kitchen gardening and Ornamental gardening)

Sessional Work 25 Marks
Practical and Oral 75 Marks

(60 + 15)

Note:— The main emphasis in this syllabus is on providing practical experience to the students, all the learning activities suggested should, therefore, be related to actual operations. For this purpose it is to emphasise that each student should at least raise 10 pots or develop kitchen or ornamental garden in a place assigned by the school for growing plants of different varieties and maintaining a record of it.

Problems to be investigated

Learning Activities

I. Pot Culture: Concept of work

(1) Identifying pot culture, kitchen garden and ornamental gardening areas.

(ii) Practical importance of the above areas of work.

(iii) Contributions that could be made in house school, community and country.

(iv) Aesthetic values of Pot Culture, Kitchen gardening and Ornamental gardening.

A: Place of pot culture as an hobby and as an aesthetic value in human life:

B: Importance of seed selection of seeds as a foundation stock for better crop production:

(i) Contribution of pot culture under limited holdings, in problem places where the soil is not suitable, and in urban areas as well as rural areas; to add a variety to fauna and flora giving the convenience of mobility and regulating the growth habit of the crop.

(ii) Supplementing diet by cultivating a variety of crops economically, from the waste at home, in a limited area.

(i) Identifying the right variety, growth habit, size of pod and the condition of pod at harvest.

(ii) Identifying the demerits of inferior quality of pod and the disadvantage of poor variety. Example: chillies, tomato and Khokol.

(iii) Harvesting the right types of fruits.
C: Practice of Pot Culture:

(i) Differentiating various sized and shaped pots.

(ii) Reasons for differences in shapes/sizes of pots.

(iii) Identifying the type of soil required for Pot Culture for different purposes.

(iv) Materials required for filling the pots.

(v) System of filling pots, the scientific and technical reasons for doing so.

(vi) Proportions of different materials at the time of filling pot.

D: Filling up of pots:

(i) Identification and selection of materials used for filling the pot.

(ii) Need for the placement of broken pieces of pots at the bottom, one layer deep, sprinkling of sand over the first layer (the two layers of pot and sand should not exceed 5 to 7% of the total filling) the rest of the pot to be filled with compost mixture of any organic manure up to the brim.
(iii) Selecting different sized pots to suit the growth of different types of vegetable crops such as french beans varieties and cowpeas.

(iv) Planting the seed at the specified depth and at uniform distance.

(v) Covering the seeds to give a levelled appearance on the surface of the pot.

(vi) Adequate but careful watering of pot through rose water can.

(vii) Levelling the pots and symmetrically arranging the pots.

E: Refilling of Pots:

(i) Renewal of filling material and washing of the pot.

(ii) Technique of handling of the potted plant while changing.

F: Cultural Practices:

(1) Pruning.

II. Ornamental Gardening:

1. Place of ornamental gardening in crop production

2. The areas comprising the units of ornamental gardening

225

2. Identifying the important ornamental plants (Annuals and perennials).
3. Significance of ornamental gardening towards the aesthetic values of life.

4. Contributions made by vegetative propagation in the improvement of plants.

5. Commercial significance of an ornamental gardening.

Establishing a Lawn:

1. The place of lawn in gardening

2. Methods of establishing a lawn.

3. Technique of preparation of soil.

4. Care and maintenance of lawn

5. Anglo-climatic requirements of the ornamental plants.

4. Propagation of plants.

5. Care and maintenance of ornamental plants.

1. The student identifies types of the grass for establishing a lawn.

2. Identifies the tools required to prepare the soil to fix up lawn.

3. Differentiates between a formal and informal lawn.

4. Preparing the soil, mixing the right type of manures and levelling the marked area.

5. Establishing laws either by seeds, by root slite and grass glumbs.
6. Routines of post-cultivation operations, such as weedings, thinning, trimming and manuring.

III. Kitchen Gardening:

A. Selection of site for kitchen gardening

   I) Location of spot, marking and layout of plots.

   II) Studying of the type and physical properties of the soil, in a particular locality.

   III) Selecting the type of the tools, required for day to day activities of kitchen gardening.

B. Planning a Kitchen garden as an economic and productive hobby.

   I) Ear-marking plots to grow different types of vegetables befitting the season and taste of individuals of the members of the family.

   II) Planning a complete kitchen garden which includes perennial vegetables of an individual taste as well as some inclusion of common fruit plants on the bunds, or near water-channels can also add variety to the kitchen garden.

IV. Miscellaneous Activities such as thinning, gap filling, nipping the shoots, staking, etc.
1. Need for the above operations.

2. Methods involved in carrying on the above activities.

V. Common Tools and Implements:

A. Study of common tools and implements.

1. Student identifies the different situations in the field.

2. He conducts different activities in the field conditions and attributes the scientific and technical reason on the basis of experience gained in the above situations.

3. He establishes reasoning on the basis of the investigation carried on in the field conditions.

4. He repeats the above operations for future establishment for growth and development of the crops.

1. Use of different types of tools at the preparatory and post-preparatory soil condition. Simple repair and maintenance of tools and implements.
B. Need to select a particular tool, for a particular soil condition.

2. Using the right types of materials for the preparation of the plots for sowing.

3. Determining the number of cultural operations to bring the required tilth of the soil.

VI. How to take soil sample for Analysis

(by rapid soil testing Method):

1. Need for soil analysis.

1. To acquaint the student with the need of soil analysis for proper plant growth.

2. Method of taking out the soil sample for analysis.

2. Taking out the soil for purpose of analysis.

3. Tools required to take the soil samples.

3. Utilising the result of the analysis for better growth and development of crops.

4. Conducting the analysis with the help of a "Rapid soil testing kit".

VII. Manures and Fertilizers:

(i) Manures

(a) Merits and demerits of organic manure.

1. Identifying a well-decomposed Organic manure.
(b) Types of organic manure.

(g) Method of preservation and use of organic manures.

(ii) Fertilizers (In-organic or chemical manures)

(a) Types of Fertilizers.

(b) Merits and demerits of fertilizers.

(c) Methods of applications of fertilizers.

(d) Precautions for the use and preservation of fertilizers.

1. Identifying the different types of fertilizers.

2. Observing the note of different plant food elements.

3. Effects of single, mixed and compound fertilizers on different crops under different soil conditions.

4. Quantity and method of application of fertilizers for maximum crop production.

5. Usefulness and efficiency of fertilizers as "foliar spray".

2. Preparation of different types of organic manures (heap and pit method).

3. Effect of organic manure on plant growth and on condition of soil.

4. Method and quantity of organic manure used for respective crops.
VIII. Irrigation and drainage:
1. Importance of irrigation and drainage in Horticulture.
3. Time and quantity of irrigation.

IX. Plant protection, Appliances, commonly used in crop production:
1. Appliances of plant protection
2. Some of the important insecticides and fungicides.
3. Methods of use of insecticides and fungicides.

1. Effect of irrigation on the growth and development of crop.
2. Need for drainage in heavy soils.
3. Identifying different methods of irrigation for Horticulture.
4. Common drainage systems used.
5. Need for the optimal use of irrigation water.

1. Identifying the types of sprayers and dusters for plant protection on the basis of the area under cultivation.
2. Acquainting with the use of the sprayers and dusters.
3. Studying action of the common insecticides and fungicides in the prevention of the attack of insects and
4. Time and the quantity to be used for different

5. Precautions to be observed while applying the insecticides and fungicides.

X. Weeds and Weed Control:
1. Importance of weed control for crop production.
2. Common methods of controlling weeds (physical and chemical methods)

XI. Seed Treatment:
1. Importance of seed treatment.
2. Types of chemical used for treatments.
3. Quantity of chemicals used for seed treatment.
4. Mixing of right concentrations for the application of insecticides and fungicides.
A. Theory
1. Brief introduction to the subject.
2. Difference between bakery and confectionery.
3. Weighing and measuring and its importance.
4. Enriching Agents.
5. Role of baking industry in the school feeding programmes.
6. Elementary knowledge about basic equipments and their maintenance.

B. Practical Activities
1. Sponge Cake with fat.
2. Short crust pastry; Jam Tarts etc.
3. Ordinary and enriched biscuits.
4. Household bread.
5. Enriched bread.
7. Simple cake decoration with glace icing.
8. Pan cake; plain and with filling.
9. Fatless sponge; swiss Roll.

10. Ibid, p.99
(iii) Designing, Dyeing & Printing

Sessional Work 25 Marks
Practical & Oral 75 Marks

(60 + 15)

General purpose of this course, is to encourage and involve the students in inventive and constructive processes. It is hoped that at the termination of the course they would have developed necessary skills of carrying out the job by themselves.

 Basically the subject Dyeing and Printing concerns greatly with colour, it may be suggested that the students should be given adequate training at the initial stage in forming visual judgement and discrimination in colour & stage in theory and practice, along with the growth of maturity in the knowledge of how to apply it on a given field of production.

A. Designing

1. Nature Study
   (Studies in Pencil drawing and out door practice)
   Study of flora and fauna: Flowers & leaves, birds and fruits, trees, branches, trunks etc. (in colour & texture).

2. Stylisation of representative, and preparation of ornamental patterns.
(To be worked out in Black & White & colours.)
Blackboard practice in decorative forms, enlargements, copy-free hand exercises.

3. Design

Elements in Design (Motifs & symbols) Form, line colour & texture.
Principles of design:
Repetition, Alternation, Figured Patterns.
Balance & Proportion.
Dominance & Subordination.
Unit & repeat of a design.

Construction of Symmetrical pattern:-

(a) By-symmetrical, and
(b) Multi-symmetrical.

4. Colour theory

Spectrum.
Light & Pigment theory.
Cause of colour.
Complimentary colours.
5. Colour dimensions

Hue, tone & intensity (Chroma)
Contrast & Harmony

Chromatic colour circles:

To prepare the circle in 12 parts.
Flower studies in sub-colour.

6. Modification of Colours

(a) Colour plus colour Hue.
(b) Colour plus white Tone.
(c) Colour plus black Shade.


Harmony of Analogy.
Harmony of contrast.


Geometric Ornamentation.
Diamond Base.
Rectangular Base.
Half-Drop Base.
Diagonal Base:
Diagonal Wave line.
Vertical Wave line.

9. Conventional treatment of Natural Forms:

Adaptation or reproduction of old motifs.
10. Portfolio:

Students are expected to submit their practicals done in the class and outdoor works in a portfolio for assessment. Students should take proper care in maintaining the standard of presentation and general arrangement of the portfolio. They may also be encouraged to collect motifs—oriental and offidental.

B. Dyeing

1. General Study of Various Textile Fibres:

Vegetables, animals, Rayons and Synthetic Fibres (Nylon, Polyester, Acrylics) and identifications of these fibres.

2. General Study of the Materials:

Chemicals used in the bleaching, dyeing, printing and finishing of the fabrics.

3. Study of the Various Bleaching Agents:

Methods of the bleaching of textile materials.

4. General Study of Different Classes of Dyestuffs:

Acid dyes, Mordant dyes, Direct Cotton dyes, Sulphur dyes, Azoic dyes, Vat dyes & stabilized vat dyes.
Acetate Rayon dyes, Reactive dyes, Acramine Emulsions, Disperse dyes, Cationic-dyes, Acid Chrome & Pthalocyanine dyes.
Application of the above mentioned dyes to respective Fibres and Fabrics, Fastness characteristic of the dyes, Anthine Black and Mineral colours and their applications to cotton Fabric.

5. General Study of Sources of Water for Industrial Purpose.

   Acquaintance with the Machines. Normally used in Textile Industry for Fabric & Yarn Processing.

7. General Study of Chemicals & Machinery.
   To survey a textile mill, Dye house & processing department.

8. Mercerising.
   Process for Cotton Fabrics. Its applications and uses.

   Faced during Bleaching, Dyeing Mercerising and Finishing.

10. Safety Measures.
    To be used in Handling hazardous chemicals, colours and Machinery operations.

    Familiarity with the basic Principles and processes of Bleaching and Dyeing; synthetic fibres and their blends.
C. Printing

Theory

1. Difference between Dyeing and Printing.
2. Various methods of Printing viz: Block, Roller and Screen.
3. Printing with different classes of dyestuffs on different types of fabrics (cotton, Nylon & Polyesters etc.) Direct dye printing, Basic, Reactive, Acramines & vat etc.
5. Knowledge of Preparation of Blocks, Screen & Copper Roller Engraving.
6. Study of Thickening agents used in Printing.
8. Study of after treatments given to Printing goods.

Practical Activities

1. Bleaching of Textile Fibre, Yarn & Fabrics.
2. Dyeing of Textile Fibre, Yarn & Fabrics.
3. Identification of colours.
5. Testing of colours and chemicals with standards.
6. Block Printing.
Introduction

The meal planning, preparation and food preservation courses are designed to attain not only knowledge but also the need to understand the importance of relationship of correct type of food with the health of an individual and the family. The course is directed towards the planning and organization of meals especially in context with getting maximum nourishment within minimum food resources. The students will learn the skill of food preparation and preservation.

Objectives:

1. To understand the importance of nutrition in relation to the health of an individual.
2. To develop a sensitivity in children regarding the correct selection of food in terms of nutritive value and cost.
3. To have an understanding of the limited food resources and how to get the optimum amount of nourishment from these.
4. To understand the importance of meal planning and to develop a skill in simple preparation of individual and family meals.
5. To learn the importance and basic principles underlying preservation and to develop a skill in preserving foods (vegetables and fruits).

12. Ibid, p.119-122
Class IX

Unit I. Meal Planning (Principles of meal planning & how to plan meals.)

Activities

(i) Food-its importance to health. Discussion.

(ii) Food-group and their contribution towards nutrition content-
    Display.

(iii) Recognition in Relation to nutritive value and cost.

(iv) Re-emphasis of above activities (participation of children in nutritional games and arrangement of exhibition).

(v) Planning a breakfast,
    Demonstration by teacher at least 3 different menus.

(a) Planning preparation and service of breakfast:
    Cereal preparation, cereal and pulse combinations, egg preparation, juice, milk shakes & fruit.
(vi) Proper use and maintenance of laboratory equipment.

(vii) Discussion—Consumption of food groups in terms of quantities per day.
(Students to measure day's intake.)

(viii) Preparation of favourite breakfast, calculation of calories and how to lay the breakfast (Demonstration by teacher).

(b) Planning preparation and service of tea.

(ix) Demonstration on preparation of tea/coffee & variety of snacks by teacher (at least 5 demonstrations)

(Butter sponge cake, drop cookies, bondas and bread pakoras, mathi, samosas, laddoos, sandwiches.)

(x) Preparation of tea and learning different snacks: Demonstration by teacher on how to lay a tea tray or tea table.
(c) Planning, Preparation and Service of dinner.

(xi) Planning and calculating for calories and proteins. Demonstrations by teacher of different combination of meals; 6 demonstration (Cereal and pulse preparation Raitas, basic method of cooking pulse, cutlets, kofta, meat curry, etc.)

(xii) Preparation and services of lunch and dinner. Service to be demonstrated by teacher. Demonstration by teacher on simple deserts (6 at least).

(d) Meal Planning for a family.

(xiii) Discussion—meal planning for a family. Emphasis on family meal time, highlighting emotional, psychological and social aspects of a meal time.

(xiv) Family and their food needs (class discussion)
Activities

(xv) Planning, preparation & service of one family breakfast/tea.

(xvi) Planning, preparation & service of one lunch/dinner.

Class X

Unit I. Planning for festivals.

(i) Discussion on the important festivals of the region & their significance.

(ii) Demonstration by teacher on a few special dishes.

(iii) Preparation by children of special dishes.

Unit II. Food Preservation.

(iv) Discussion by teacher on the importance of preservation, principle and simple methods applicable in the homes.

(a) Storage of fruits and vegetables.

(v) Discussion—each child to get one spoilt food and see the changes in food and the organization himself (microscopic). Prepare a little poster/chart of it.
Activities

(b) Preparation of jams/jellies.

(vi) Demonstration on jam/jelly preparation by teacher. Tests for pecten content to be shown.

(vii) Preparation of jams, jellies and murabas by students in groups.

(c) Squash preparation.

(viii) Demonstration on squash preparation by teacher.

(ix) Preparation of lime and orange squash in groups by children.

(x) Children to make labels and calculation of cost of the above products prepared.

(d) Preparation of pickles.

(xi) Types of pickles and basic methods of pickling—Discussion

(xii) Preparation of sweet and salted pickles.
(e) Chutney preparation.

(xiii) Class discussion chutneys
(preservation of chutneys)

(xiv) Preparation of sweet and salted chutneys from fruits and vegetables.

(xv) Preparation of labels for the above and costing of the items.

(xvi) Discussion—How to organise a sale.

(xvii) Conducting a sale of products

(v) TAILORING AND EMBROIDERY

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Introduction

The work experience classes in Tailoring and Embroidery will aim at developing in children aesthetic sense, creative ability and appreciation for colour, line, rhythm and design. These values will be developed through the exercise of making of utility or accessory articles of clothing. The children will be taught the skills in stitching and embroidery.
Objectives

1. To teach skills in sewing and embroidery in making accessory articles for the use of young boys and girls.
2. To develop values and knowledge of the advantages of making things at home, as against purchasing in the market.
3. To understand the principles of good grooming by judicious selection of material and design.
4. To develop skills in making garments of different styles for children.
5. To create the art of decorating garments by simple modes as patching, trimming and embroidery.
6. To appreciate traditional Indian embroideries and develop skills in creating suitable patterns for accessories and articles of use in home.

Unit I. Accessory Articles for Personal Use.

Activities

1. A. Introduction by exhibiting finished articles and demonstrating the method of making.

B. Making of one of the following.
   (a) change purse
   (b) pencil case
   (c) comb case
   (d) spectacle case

Ibid. p. 113-118.
A-ctivities

2. A. Introduction by exhibiting finished articles and demonstrating the method of making.

B. Demonstrating the use of sewing machine.

C. Making of one of the following:
   (a) Pouch
   (b) Shopping bag
   (c) Sling bag

3. A. Introduction by exhibiting one finished article and pictures or slides of variation in decoration and demonstrating the method of making.

B. Making an apron on checked material.

Unit II. Baby's Layette

Activities

1. A. Introduction by showing finished articles and demonstrating the method of making.
B. Making of one flat and one shaped diaper.

2. A. Introduction by exhibiting finished articles and demonstrating the methods of making.
   B. Making of either a bib or feeder.

3. A. Introduction of exhibiting one finished article and illustration of variations in the style and demonstrating the method of making.
   B. Making a baby's bonnet.

4. A. Introduction by exhibiting a finished article and demonstrating the method of making.
   B. Making a reversible baby's jacket.

5. A. Introduction by exhibiting finished articles in different styles.
   B. Demonstrating the method of making.
   C. Making a jhable.
Activities

6. A. Introduction by exhibiting a finished article and demonstrating the method of making.
   B. Making a plastic lined diaper panty.

7. A. Introduction by exhibiting finished articles.
   B. Demonstrating the method of making.
   C. Making of vest of two styles
      (i) Plain
      (ii) Double breasted

8. A. Introduction by exhibiting finished articles or illustrations.
   B. Introducing the students to knitting by demonstration.
   C. Making a baby's knitted layette comprising of:
      (a) Vest   (b) jacket
      (c) bonnet  (d) Bootees.

Unit III. Children's Clothing

1. A. Introduction by exhibiting finished articles and demonstrating the method of making.
Activities

B. Making a bloomer adopted from jangla.

2. A. Introduction by exhibiting a finished article and demonstrating the method of making.

B. Making a half-pant with side opening.

3. A. Introduction by showing both the finished articles.

B. Demonstrating the method of making.

C. Making an 'A' Line frock or bushirt.

4. A. Introduction by showing various styles from design books and booklets.

B. Demonstrating the method of making.

C. Making of a sunsuit and a romper.

5. A. Introduction by showing various styles from design books and booklets.

B. Demonstrating the method of making.
C. Making of three frocks:—
(a) With gathered or smoked skirt.
(b) With pleated skirt.
(c) With flared skirt having variation in sleeves, collars and yokes.

Unit IV. Clothing for Teen-Agers.

1. A. Introduction by exhibiting a finished article and demonstrating the method of making.
B. Making of Kurtas for a girl or a boy.

2. A. Introduction by exhibiting a finished article and demonstrating the method of making.
B. Making a pant-top for or 'T& Shirt for boys.

3. A. Introduction by exhibiting finished articles and demonstrating the method of making.
B. Making a Chooridar pyjama or a Salwar.
4. A. Introduction by exhibiting
the finished garments and
demonstrating the method of
making.
B. Making of pants or bell-
bottoms for girls or boy.

5. A. Introduction by showing
various designs from design
books and booklets.
B. Demonstrating the method
of making.
C. Making of either:
(i) night suit for boy; or
(ii) night dress for girl.

6. A. Introduction by showing
various designs from design
books or booklets.
B. Demonstrating the method of
making.
C. Making of either:
(i) a duster coat for girls, or
(ii) dressing gown for boys.

Unit V. Traditional Indian Embroideries
1. A. Introduction by exhibiting
finished articles (wherever
possible) or illustrations
from booklets and books, or
hand made slides.
B. Demonstrating the method of working.

C. Making at least 3 articles of household or personal use, using different traditional embroideries.

(vi) Maintenance and Repair of Household Gadgets

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Introduction:

The work experience classes in Household equipment and Utility articles are designed to promote knowledge and skills and to provide rich educational experience to the student. The articles included in the course serve to stimulate the aesthetic and creative talents of children and to draw their attention to the acute need for skillful and economic use of available resources.

Objectives:

1. To develop knowledge and skill for the use and care of household articles—mechanical and electrical.
2. To develop competence in planning, designing and making simple utility articles for household use.

3. To develop competence in making inexpensive accessories for use in home, using indigenous materials.

4. To develop the value of thrift, economy, creativity and importance of utilization of waste materials.

Class IX

Unit I. Art is Basic to Development of Personality

Activity

1. Floral art, making of flowers, lamp shades; fresh and dry flower arrangement.


3. Baskets for storing vegetables flower pots.

4. Floor decoration-Alpana Kalam Kalam.

Unit II.

1. Picture framing.

2. Simple equipment used in homes-containers and spoons.

3. Coaster hot pads of different types.
4. Making crushes for different kinds of cleaning in the home making washing aids.

Unit III. Repair and Reutilization

1. Waste paper basket.

2. Wire net food covers.

Unit IV. (1) Mechanical Gadgets.

1. Cycle Repair

2. Water tap-Repair

(2) Finishing the Utensils.

1. Tinning the utensils

Unit V. Electrical Gadgets.

1. Torch cell

2. Lamp repair

Class X

Unit I: Three Methods of Supplementing Incomes: Soft Furnishing Unimportant for Equipping the Home.

Activity

1. Making cushions and pillows, renovating old soft furnishings, making covers.
2. Furniture caning.
3. Nivar furniture.

Unit II, Utility Household Articles
1. Collapsible dyer.
2. Bookshell

Unit III,
1. Furniture upholstering.
2. Hand bags and travel bags.

Unit IV,
1. Decoration for special occasion.

Unit V, Finishes and repairs in the Home.
1. Wall finishes (distemper, painting etc.)
2. Spray painting and Varnishing.

(vii) Nursing 15
Sessional Work 25 Marks
Practical & Oral 75 Marks
(60, 15)

The purpose of this course is to acquire a basic knowledge and develop simple skills for care of the sick
and to develop basic competence to make worthwhile contribution to health services of the community.

Specific Objectives:

- The Students:
  1. acquire knowledge and understanding of the basic principles for caring the sick.
  2. develop an understanding of basic needs of a sick person in bed.
  3. get practice in carrying out simple treatments.
  4. are able to give simple health instructions to patients and family.
  5. develop interest and correct attitude towards the care of sick, promotion of health and prevention of diseases.

Notes:

1. This course has been designed for two academic years. The emphasis in the course has been on the care of a person in health and sickness in hospital and community, but more emphasis has been given to the care of person in sickness because of the fact that some background material and knowledge has already been provided in the syllabuses for Life Sciences and

15. Ibid, p. 147-149.
Health Education which are to be studied by all the students on compulsory basis. It is, therefore, advised that this background knowledge should be suitably correlated wherever necessary by making cross-reference.

2. In order to give students exact idea of various skills and techniques involved, it is essential that sufficient demonstrations are arranged in the classroom. For this purpose it is also necessary that a small demonstration room is set up with all necessary equipments and facilities the list of which is given separately in the handbook published by the Board.

For observation, the students should also be taken to clinics and hospitals where they should watch different practices and techniques performed. For this matter, a proper liaison should be built with the hospital authorities. At least 60 periods should be set apart for such observational visits.

3. It would be educationally more sound if the demonstration room set up in the school for this purpose also works as an active dispensary for the school for health and minor ailments.

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Unit II. When sickness occurs

Effects of illness on the sick person and the family members. Recognizing the changes in sickness—changes in appearance, in digestive system, in general condition (Urine, stool, sputum and other discharges), in behaviour etc.

Unit III. Observation and Recording

Significance of temperature pulse, respiration.
Thermometer—normal, types of thermometer, how to read and cure.

Temperature, pulse, respiration—normal, abnormal, sites, methods of taking.

Unit IV. The sick person's unit: Importance of bed rest.

Selection of Unit—the bed and equipment. Importance of cleanliness, Cleaning and care of the unit, Ventilation.

Disposal of refuse, sputum, urine, stool, self-protection.
Disinfection of bag, linen, sputum, stool, uring, unit; lotions, uses and their preparations.

Practice of health-teaching.

Demonstration of preparing paper bag, hand-washing and gown technique.
Unit V. Hygiene of sick persons (Approach to this unit should be elementary)

Bedmaking—purposes, principles.

Demonstration and practice—
Making Unoccupied bed, bed making with patient, changing linen of bed patient.

Personal hygiene—Review the importance and maintenance of hygiene in health and importance of maintaining hygiene in a sick person.

Effects of poor hygiene.

Mouth-care, principles.

Demonstration and practice
of mouth wash for a helpless patient, assisting a bed patient for mouth wash.

Hair-care, principles.

Demonstration and practice
on hair combing, hair washing in bed, pediculosis treatment.

Feet, hand, nails-care, principles.

Demonstration and practice
of cutting nails, washing in bed.

Skin-care, principles, clothing.

Demonstration and practice
of sponge bath.
Bedsores—definition, causes, sites, early signs, prevention and care.

Unit VI. Providing comfort, safety, rest and sleep.

Posture & body mechanics—Musculoskeletal system of human body. Its relationship with comfort and health. Importance of comfort, causes of discomfort, providing comfort—various positions, comfort devices and their uses.

Importance of safety, rest and their uses.
Importance of safety, rest and sleep in sickness; effects of lack of sleep, methods of inducing sleep.

Providing mental rest and relaxation—Importance of quietness, harmony in the environment, use of recreation & diversional therapy.

Demonstration and practice of comfort devices—using back rest, pillows, cardiac table, foot-board, air cushion, heel rings.

Demonstration & practice of giving and taking bedpans and urinals and clearing & care assisting a helpless patient.

Saving of specimens (Urine, stool, sputum etc.) Testing urine for albumin and sugar.
Planning a day for the sick person.

Meeting eliminational needs in health and sickness.

Unit VII. Maintaining Nutrition.

Types of diet—solid, semi-solid, liquid.

Demonstration and practice of serving diet, feeding a sick person.

Preparation of simple food—conjees, soups, juices etc.

Unit VIII. Giving Medicines.

Understanding the meaning of the abbreviations in common use, different types of drug—internal & external care of drugs, prescription,

Measures used, domestic equivalents, rules of giving medicines.

Demonstration and practice of giving pills, powder liquid etc.

Unit IX. Carrying out simple Treatment

Hot application

Demonstration and practice of filling and applying hot water bag, fomentation, steam inhalation.
Cold application
Demonstration and practice of filling and applying ice cap, cold compress.

Eye, Ear, Nose treatments.
Demonstration and practice of cleaning, washing, applying drops ointments.

Enema
Enema—Demonstration and practice of giving simple enema, applying suppository.

Care of wound
Demonstration and practice of simple dressing and disposal of soiled dressings and sterilizations.

Other Work Experience subjects with some degree of Home Science application in this curriculum are things like commercial art, poultry, dairy farming, bee-keeping, book craft, leather work, clay modelling and papier machie, pottery, puppetry, toy making, sculpture etc. Besides, Domestic Science, child care, first aid are also mentioned as work experience activities but the details of these have been left to be worked out by individual school, depending upon the facilities available in the neighbourhood.
1. Objectives
Students are able:

1. to develop a scientific point of view of health with reference to traditional and modern concepts of health;

2. to identify health problems and understand their own role along with the role of health and medical agencies in meeting these problems;

3. to take interest in current events related to health;

4. to arrive at suitable conclusions based on scientific knowledge and take actions as individuals, members of a family and community for protecting maintaining and promoting individual and community health;

5. to set an example of desirable health behaviour to others.

II. SYLLABUS

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16. Ibid, p. 167-70
Health is a moving target and an ecologic resultant, involving the interaction of many factors and conditions.

Meaning, nature and concept of health, interdependence of various dimensions of health (Physical, Social and Mental) factors affecting health, (personal, hereditary and environmental including socio-cultural factors and importance of health) for the individual and the community.

Being aware of environmental conditions helps in protecting one's own health.

Environmental conditions in villages and towns in relation to health status of people—waste disposal practices and pollution of air, water and land, compost pits, gobargas plants, Sanitary latrine; sources of drinking water, healthful housing.

Certain practices contribute towards preservation and promotion of individual and community health.

Personal health practices for preservation and promotion of health;

Personal habits, Personal
Unit II. Health Hazards of Modern Age

Technological development besides improving the quality of life have also created a number of health hazards and population explosion has further accentuated them.

Unit III. Growth and Development

Growth and development including physical growth, intellectual advancement, emotional maturity and social responsibility follow a predictable sequence yet are unique for each individual.

cleanliness including oral and dental hygiene, clothing, rest and exercises, our cultural practices in relation to personal health.

Technological development-factors Agriculture transport systems, nuclear power plants etc., and related to the health hazards: problem of over-population in relation to the welfare of the family, community and the nation. Role of Individual and State in minimizing these hazards.

Review of body structure and functions:
In early adolescence the range of individual differences in body development is greater than at any other time. No two people are alike in body build.

Differences in growth rates may result in emotional problems.

An understanding of the basic structure and function of the body systems provides a background for health maintenance.

Emotions effect body functions. A mature person takes responsibility for his own health and the health of others; viewing health as a means to an end and not an end in itself.
A variety of factors emerging from physical, economic and socio-cultural environment of individuals may be responsible for male and under-nutrition of people leading to bad health and disturbed family life affecting national prosperity.

Factors affecting nutritional status of an individual
Heredity
Environment (physical, religious, socio-cultural, and emotional conditions).
Family economy.
Rest, sleep and relaxation.
Exercise.

Adequate nutrition is important in adolescence to provide for rapid growth and increased physical activity.

Nutritional needs of body for calories and nutritive components (carbohydrates, minerals and water), cheap and locally available sources rich in these nutrients.

Nutritive content as well as cost is important to be considered when buying foods.

Foods of equal cost may be different in nutritive value.

Nutritive value of commonly used food stuffs.

Caloric and nutritive requirements provide a basis for appraising daily food intake.

Balanced diet, its importance and requirements according to age, sex, occupation, pregnancy and lactation (with special emphasis on requirements of adolescents.)

Deficiency diseases.
Unit V. Communicable and Non-Communicable Diseases.

While everyone is susceptible to communicable and degenerative diseases, these can be prevented and controlled.

Communicable and non-communicable diseases. Role of agent and environment in the spread and prevention of diseases; minor ailments, Body defences, immunity; natural and acquired importance of regular medical check-ups (early diagnosis) in prevention of communicable and degenerative diseases. Role of immunisation in prevention of specific diseases and immunization schedules, for Small pox, T.B., Diphtheria, Tetanus, whooping cough, Polio, Cholera, Typhoid and Rabies.

Health morbidity and mortality in our country.
National Health Programmes, role of individual and government in these programmes.

Unit VI. Consumer Education

Medicine and surgery are

Elementary knowledge of various...
specialised fields and practice of these by unqualified persons may lead to serious complications and even to death.

Drugs have played an important part in the spectacular reduction of mortality in recent years.

Drugs have many effects including "side effects" on people.

The illegal or excessive use of drugs is called drug abuse. Drug abuse is a manifestation of personal inadequacy to deal with various facts of life.

The drugs abused today fall into several categories.

One of the serious consequences of drug abuse is drug dependency.

Opportunities are varied and many in health careers.

*systems of medicine prevalent in our country and specializations available. Development of new drugs and their role in controlling the incidence of disease.

Prescription and non-prescription drugs, Habit forming drugs: Tobacco and alcohol. Importance of going to right place and person for health and medical services. Dangers of going to a quack.
Unit VII Health Organization

Individual, community and State have specific but complementary roles in protection, preservation and promotion of health.

Unit VIII Safety, First-Aid, Home Nursing and Civil Defence.

Knowledge, understanding and intelligent practice of principles of first-aid, home nursing and civil defence may save the lives of those in danger.

Accidents may be prevented by knowing their causes and following safety precautions.

Environmental hazards may be

Medical and Health set up at local district, state and national level. Voluntary agencies working in the field of health. Role of official and non-official agencies in health protection preservation and promotion.

Common accidents that occur in home, community and schools. Major accidents which cause deaths in rural and urban areas.

Safety rules related to: Making fires, using stoves/gas/electricity, climbing stairs, crossing roads, boarding transport, cycling, swimming, playing storing, poisons and medicines, practising crafts, working in laboratories and using electric gadgets.
First-aid measures for cuts, wounds, bleeding, fractures, bites and stings, drowning, fainting shock, and burns.

Principles of First-aid, and home nursing and skill in dealing with specific situation(s) Measures to remove environmental hazards.

UNIT IX. International Health (3 periods)

International health programme is a cooperative effort on the part of the nations of the world.

Many countries have similar health problems.

Travellers need to prepare themselves for the health problems in the countries they visit.

A-2. HOME SCIENCE AT PLUS TWO STAGE:

The +2 stage of schooling is a landmark in the development of school education. In accordance with the recommendations of the Education Commission (1964-66), the +2
stage, known in the common parlance as Higher Secondary, has to offer both academic and vocational streams to prepare children for University Higher Technical/Professional Education as the case may be. It is visualised that at least 50% of the new matriculates would go to the vocational stream thus diminishing the undue rush in the academic university courses. The place of Home Science is equally important in both the streams—Academic as well as Technical. Unlike other academic subjects, Home Science is both an academic and a technical subject. As a result, Home Science curriculum at this stage has to have a triple-pronged approach; First, to prepare Home Science technicians who after education at +2 stage might terminate from education to join the world of work in their respective vocations; secondly, to prepare a sound technical background of these children to enable them to join Higher Professional courses in Home Science; and thirdly, to prepare them adequately in the academics of Home Science to help them join the University courses. The suggested general pattern of courses for the +2 Academic and vocational streams is:

"Pattern of Courses for Academic and Vocational Streams"

A. Language 25% time for all streams.

General studies (social, economic, scientific, etc.)
B. Science, social science, humanities, including literature.

C. Science, social science and humanities courses designed to understand the basis and scope of various vocations.

D. Vocational and practical work.

B. HOME SCIENCE IN UNIVERSITY EDUCATION:

The existing position of Home Science Education at University level is something of a mixed type. A general observation is that Home Science is being taught both in the Faculty of Arts as well as Faculty of Science at the First Degree level. While at the Post-graduate level, it is more or less contained in the Faculty of science. This apart, a number of Agricultural Universities in the country also provide for education in Home Science at graduate and Post-graduate levels, preferably in their Faculty of Sciences. Doctoral level courses in Home Science are also available in certain University

Another important observation pertains to the duration of courses offered at Graduation level. These range from two to four years. Only a few institutions like Punjab Agricultural University College of Home Science, Delhi University College of Home Science, Udaipur University College of Home Science, M.S. University College of Home Science, SNDT University College for Women offer specialisation/honours level courses in Home Science at first degree level.

Besides, a number of Universities offer Home Science as a teaching subject for the preparation of secondary teachers as also a host of diploma courses both at graduate and Post-graduate levels; the nature of their curriculum being discussed under the section 'Home Science in Professional Education' elsewhere in this chapter.

8.1. HOME SCIENCE IN PRE-UNIVERSITY COURSE

As to the pre-requisite for joining the existing First Degree Course in Home Science, the nature of curriculum already gone through might differ, though slightly in content rather than in spirit, from University to University. But, by and large, the Pre-University courses seek to cover a bit each of Child Development and Psychology, Hygiene and Physiology, House-Hold
keeping etc. Special consideration is given to students who studied Science at school stage for admission to the B.Sc. Home Science courses. "Most colleges either make Science compulsory for entrance to the B.Sc. programme or give preference to applicants who have specialised in science in high school. College authorities feel that girls who have specialised in home science in school do not have sufficient science background to cope with the undergraduate home science programme. In a few cases, some home science institutions accept girls who have specialised in arts subjects at school but they are required to have qualified with a first class in economics or mathematics." 18

However, for the two year degree course, the admission qualification is Intermediate or equivalent Examination, preferably with Home Science as a subject. Apparently, a number of universities offer Home Science Courses for Intermediate Examination, which in a number of cases used to be held by the universities. Lately, most of the Intermediate Examinations are now being held by the Boards of Sec. Education. Certain universities prescribe a pre-university certificate course in Home Science as a pre-requisite qualification for

admission to graduate level courses in Home Science. A specimen of such a course is available in the Pre-University Syllabus in Home Science as prescribed by the University of Rajasthan. A casual glance at this syllabus would reveal that a student wishing to join the degree level course in Home Science ought to know beforehand 'Human Body' in its entirety, i.e., in its structure, functioning, developmental/maturation needs etc., on the one hand and the 'Environmental Resources' in all their manifestations - physical, biological and social perspectives - coupled with their implications for proper and sound development of human beings as an ideal house-holders as well as social beings, on the other.

Details of the syllabus are as follows:

There shall be one paper of three hours duration carrying 100 marks divided into three sections viz. (1) Physiology and Hygiene, (2) Child Development and (3) House-Hold Management. Minimum pass marks-33.

1. Physiology and Hygiene 50 marks
2. Child Development 25 marks
3. House-Hold management 25 marks

Notes:- Only an elementary knowledge of the topics is expected.

Section I- Physiology and Hygiene

Elements of Anatomy and Physiology

1. A general study of the structure of the human body.
   The cell—the elementary Tissues—the Organs and the system of the body.

2. The Skeleton—an outline study of the bones of the skeleton (technical names of only the main bones of the body to be learnt).

3. The Joints and muscles—Varieties of joints with common examples, in the body.
   Varieties of muscles and their actions.

4. The Blood composition and functions.
   Clotting of blood.
5. The Circulatory System

(1) The Heart—its structure.
   The Organs and processes of digestion, absorption and assimilation of food.
(2) The Blood Vessels—arteries, capillaries and veins.
(3) The Course of Circulation through the body.
(4) The Lymphatic System—Spleen—its function.

6. The Respiratory System—Organs of respiration. The purpose and mechanism of breathing. Composition of inspired and expired air.

7. The Digestive System—Food needs of the body and classes of food stuffs will be studied under nutrition.

8. The Excretory System

(1) The organs of excretion.
(2) The Urinary System—Kidneys, ureter, bladder, their functions, Mechanism of urine formation, Composition of urine.
(3) The skin—structure and functions.
   Regulation of body temperature.

9. The Nervous System

(1) The Central Nervous System—Brain and the spinal cord.
(2) The peripheral Nervous System—the nerves.
(3) Autonomic Nervous System—sympathetic and para-sympathetic.

(4) The Sense Organs.
   Eye—structure and function. Defects of vision.
   Ear—structure and function.
   Skin, nose and tongue as sensory organs.

10. The Endocrine System. Elementary knowledge of the function of pituitary, adrenals, thyroid, parathyroid, thymus, gonads and pancreas.

Hygiene

1. Air and Ventilation—Composition of air, Impurities in air and their effects on health.

3. Foods and Nutrition

(1) Foods—Food need of the body, physiological classification of foods. Constituents of food—their sources and importance.

(2) Diets
Balanced diet—its Importance
Malnutrition—cause, signs, symptoms and prevention.

(3) Cookery—Effects of cooking, Principles of cooking.
Methods of cooking, Retention of food value in cooked foods, Importance of raw fruits and vegetables, place of salads in the menu, Principles and methods of preservation of foods.

4. Personal Hygiene

(1) Cleanliness and care of skin, hair, nails, teeth, eyes, nose and ears.

(2) Breathing habits.

(3) Posture.

(4) Habit with regard to eating, drinking and smoking.

(5) Exercise, rest, sleep, recreation.

(6) Clothing.

(7) Social customs affecting health.
5. Infection


(ii) Methods of prevention and arrest of prevalent, infectious diseases with special references—

Smallpox, Diphtheria, Whooping Cough, Tetanus, Poliomyelitis, Tuberculosis, Typhoid, Cholera, Dysentry, Worm Infections, Malaria.

Section 2 - Child Development


3. Feelings and emotions — Training of emotions in a child. Motivation and training of imagination of the child.


5. Hobbies and play activities.
   (a) Toys and their utility.
   (b) Organised games.
   (c) Unorganised games.
   (d) Stages in the growth of play activities.
Section 3-Household Management


3. Planning of the Household duties - For wives who stay at home and for those who are employed in service. Rest, recreation and social contacts. Social service activities. Useful hobbies. Care of the children and the aged. Care of domestic animals and pests.


5. Family-Advantage and disadvantage of joint family system. Family adjustments and obligations as a daughter, sister, wife, sister-in-law, daughter-in-law and as a mistress of the household. Obligations to the community as a citizen.

B.2 HOME SCIENCE: FIRST DEGREE ARTS COURSE (TWO YEARS)

Affiliating Universities in the State of Uttar Pradesh provide for a two years degree course in Home Science under their Faculty of Arts. The general pattern of curriculum prescribed by these Universities follows the one in vogue in Agra University, the oldest among them. For example, Kanpur University adopts the Agra University theory course in toto, but with the addition of practical sessional work and tests in the areas of Handicraft, Kitchencraft and Biochemistry in Part I of the course. However, the University of Meerut makes a rather significant departure in approach and in renovating the traditional Agra University curriculum in Home Science. The concepts of 'Housing' and 'Child Development and Family Relations' are the new sections of Meerut University curriculum. Not alone these, the Meerut curriculum offers an overall and sufficiently rich modification of minor details of the content and practical work over Agra or that of Kanpur University course. For instance, instead of merely mentioning the use of gadgets in Household, it seeks to specify 'uses and care' of gadgets like cookers and cooking ranges, washing machines, Geysers, Refrigerators and other miscellaneous kitchen gadgets. There is many a
variation or enrichment is similar other details. However, the paper on Child Care and Mother Craft in Kanpur and Agra give the curriculum its traditional value. Besides, it seeks to work out the psychological and educational Orientation of a Home Science Curriculum and makes it to be of practical utility in our day to day life. This is what a casual glance could afford to convey. For a detailed comparatives picture of Home Science as a two years First Degree Course under Arts Faculty, the curricula in use in Kanpur and Meerut Universities are presented here.

B.A. Part I (Home Science)

Notes: The Internal examiner should be allowed by the University to award 20% Marks to the examinee on the basis of sessional work, record-book, etc., in the University Practical Examination.

Paper I. Household Arts Max. Marks. 30

1. Introduction to art. Appreciation of art and Fundamental Principles of Art Harmony, balance, proportion, rhythm and emphasis; their application in Home Decoration.

2. Design-Structural and Decorative.

3. Harmony-Proportion, Balance and Emphasis on ............
   (a) Furniture and its arrangement.
   (b) Floor-coverings and decorations.
   (c) Curtains for windows and doors.
4. Line and colour: Principal and their application to .......
   (a) Wall and floor backgrounds.
   (b) Furniture.
   (c) Curtains and other household linen.
   (d) Accessories.

5. Arrangement of accessories in Home Decorations.
   (i) Picture, (ii) Ornaments, (iii) Lamps & Lighting,
   (iv) Cushions, (v) Flowers, (vi) Vases, (vii) Books,
   (viii) Objects of entertainment e.g. Radio, Gramophone,
       Television, Tape-recorder, Projector, etc.

6. Arrangement of various rooms and verandahs.

7. Planning a home in view of family income and requirement.

8. Kitchen - Various types of kitchen. Various types of
   stoves, choogahs and fuel. Ideal Kitchen-Equipping
   and furnishing, a kitchen from the point of view of
   (1) Fuelsaving, (2) Labour saving, (3) Time saving.

   Paper II - Nutrition, Biochemistry & Bacteriology

Max. marks 30

1. Essential constituents of food: Proteins, fats, carbo-
   hydrates, minerals and vitamins (A, B, Complex, C, D, E
   and K) ... their composition, sources, function and
daily requirements, Vitamins deficiency, diseases.

20. Kanpur University, Faculty of Arts, Bachelor of Arts
   Syllabi and Courses.
2. Calorie requirement according to age, occupation, climate and sex.

3. Malnutrition and under-nutrition.

4. Balanced diet for different ages, special diets in common diseases, vegetarian and non-vegetarian diets.

5. Milk and milk products and their composition. Milk as a complete diet.

6. Planning of meals for different age groups, income groups, adult, sedentary, active, over-weight, under-weight persons, pregnant and lactating women.

7. Need and methods of cooking food including pressure cooking.

8. Need and methods of preservation and storage of different types of food stuffs.


Biochemistry:

Classification of food, composition of proteins, fats carbohydrates and elementary ideas about their digestion and absorption. Elementary ideas about saliva, gastric juice, bile and digestive enzymes.

1. Definition of Bacteriology. Yeast and mould and their general functions in nature and in home.

2. Bacteriology of milk, water, air and sewage.
PRACTICALS: Max. Marks 40.

Sessional work includes 10 marks and the balance of thirty marks to be equally distributed for handicraft and kitchen craft and biochemistry practical tests.

Handicraft and kitchencraft:
1. Cleaning and Polishing of glass, metals, wood and floor.
2. Alpana designs for floor decoration.
3. Flower arrangement.
4. Planning and preparation of balanced diets; preparation of biscuits & cakes.
5. Preservation of food.

Biochemistry:
1. Tests for the detection of proteins, carbohydrates, fats and minerals (Calcium and phosphorus) in milk.
2. Hydrolysis of starch by saliva and Hydrochloric acid.
3. Tests for glucose, fructose, starch, menthanol, ethanol, acetone and acetic acid.
Sessional work:

(i) Embroidered articles - One of the following:
    Luncheon set, duchess set, cushion covers,
    tray cover, tea cosy, table-cloth sets.

(ii) Record of practical work done during the session.
B.A. Part II (Home Science)

Paper I, Household Management, Textile and Domestic Economy.

Max. Marks. 30

1. Structure and functions of the household. Family as a social unit. Aims and functions of family. Manifold privileges and responsibilities of family members. Advantages of planned family living. The housewife's role as a director, manager, planner, coordinator and organiser.


5. Introduction to textiles. Classification of textile fibres.


7. Selection of fabrics for garments, household linen and other articles keeping in view their cosi, colour, texture, design, suitability and durability.

8. Management of time, money, energy and other resources of family. Improving methods of work and working conditions. Use of time and labour saving devices such as pressure cooker, toaster, vacuum cleaner, steam cookers.

1. Mothercraft, Biological and physiological fitness of women for motherhood, Psychological preparation.

2. Pregnancy, Parental care, Mother's health, food, dress and other necessities.


4. Care of the Infant.

Care of the children and common ailments like teething, wearing, diarrhoea, dysentry and indigestion etc.

5. Formation of healthy habits.


Practicals: Max. Marks. 40

1. Preparation of soap and polishes, paints.

2. Modern household equipment and gadgets, their maintenance.

3. Reading of meters and setting of fuse-wires.

4. Preparation of infant feeds.

5. Chemical and physical tests for indentification of different textile filars, Children's garments.
Sessional Works:

Garments prepared by the candidate during the year and record of practical work done during the session carry 15 marks.

Bachelor of Art (Home Science)

Max. Marks 35

Course I Home Management:
(Theory Periods 6, Practical Periods 4)

   The family as social institution.
   (a) Definition of family, Patterns of Families,
       Household as a social institution.
   (b) Functions of the family.
   (c) Needs and aims of the family.

2. Concept of Home Management.
   (a) Values and goals of individual and family living.
   (b) Process of decision making.
   (c) Management of family income sources, types of income,
       (i) Family budget,
       (ii) Factors affecting family budget,
       (iii) Financial records of the household, their purpose and nature,
       (iv) Ways of supplementing family income part and
full time employment as wage earner and small scale home industry.

3. Savings and Investments:
   (a) Needs for saving.
   (b) Savings and Profitable investments.
      i) Post Office,
      ii) Chit Fund,
      iii) Banks,
      iv) Insurance,
      v) Bonds,
      vi) Shares,
      vii) Unit Trust.
   (c) How to open a Bank Account?
   (d) Different types of accounts.
   (e) Insurance—its chief principles—Types of policies.
   (f) Relative merits of different types of savings and investments.
   (g) Study of—
      i) Pass Books,
      ii) Vouchers,
      iii) Cheques,
      iv) Savings Certificates.

21. Meerut University, Faculty of Arts, Bachelor of Arts Syllabi and Courses.
v) Share Papers,
vi) Insurance Papers,
vii) Unit Trusts.


(a) Personality of the Home,
(b) Art Elements,
(c) Colour and Colour Harmony,
(d) Design and Composition.

i) Harmony,
ii) Balance,
iii) Rhythm,
iv) Proportion,
v) Emphasis.

5. Housing:

(a) Concept of Housing,
(b) Selection of Housing,
(c) Owning and renting a house-relative merits of both.

6. (a) Basic principles of selection and arrangement of furniture, floor coverings, draperies and other accessories.
(b) Furnishing a house at various economic levels.
(c) Planning use of available space-activity centres.
(d) Furnishing multipurpose rooms.
(e) Flower arrangement.

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7. Care of the house:

(a) Daily and periodical cleaning.
(b) Sanitation.
(c) Control of pests.
(d) Care of wood, cane, bamboo, metals and glass.
(e) Preparation of a thin polish of wood.

8. Time and Labour Saving Devices: Use and care:

(a) Different types of cookers and cooking ranges.
(b) Washing Machine.
(c) Geysers.
(d) Refrigerator.
(e) Other miscellaneous kitchen gadgets.

Practicals:

1. Daily cleaning, Class Room, Food and nutrition, Laboratory, Library.
2. Cleaning and polishing of wood, cane or bamboo, metal, glass and porcelain.
3. Preparation of a thin furniture polish and flit.
4. Flower and foliage arrangements.
5. Selection of simple unexpensive materials to be used as accessories in Home Decoration e.g. Sofa Covers, Curtains, Cushions and other accessories.
1. Introduction of Textiles:

(a) Classification of Textile Fibres:
   (i) Cellulose,
   (ii) Protein,
   (iii) Mineral,
   (iv) Synthetic,

(b) Identification of Fibres:
   (i) Physical,
   (ii) Burning,
   (iii) Microscopic.

2. Source, Manufacture, Physical and Chemical properties of the following Fibres:

(a) Cotton and Linen,
(b) Wool and Silk,
(c) Nylon, Rayon, and other synthetic fabrics.

3. Special finished:

Scouring, Bleaching, Mercerizing, Sanforizing, Beatling, Calendering, Creping, Glazing, Degumming, Delusterlng, Crease-resisting, Water proof, Moth-proof, Fire proof.

5. Colour and Fabrics:
   (a) Plain dyeing.
   (b) Batik dyeing.
   (c) Tye and Dye.

6. Selection of Fabrics - for garments, house-hold linen and other articles keeping in view their cost, colour, texture, design suitability and durability.

7. Storage of Fabrics.

8. (a) Basic Principles of Laundry.
   (b) Principles and Methods of laundering:
       Wet and dry cleaning friction, suction, kneading and squeezing.
   (c) Laundering reagents and equipments.
   (d) Stain removal - Tea Coffee, Milk, Blood, Ink, Paint, Tar, Curry.
Course III - Foods and Nutrition.


1. Essential constituents of Food: Protein, Fat, Carbohydrate, Minerals and Vitamins (A, B Complex, B12, C, D, E and K) their composition, source, functions and daily requirement.

Deficiency diseases caused by the absence of different constituents as foods.

2. Nutrient requirement according to age, occupation, climate and sex.


4. Elementary knowledge of digestion and absorption of food, Basal metabolism.

5. Different methods of cooking and their effects on foods.

6. Food Hygiene.

(a) Sources of contamination:
   i) Soil, air, water;
   ii) Animals, insects and bacteria;
   iii) Containers;
   iv) Handling of food.
(b) Preventive Methods:
  i) Clean water supply,
  ii) Refrigeration and steaming,
  iii) Protection from insects and dust,
  iv) Types of containers.

7. Basic Principles of meal planning and planning, balanced diet for the following:

   i) Children,
   ii) Adolescents,
   iii) Adults,
   iv) Over weight and under weight
   v) Pregnant and lactating mother,
   vi) Diabetic patients,
   vii) High and low Blood Pressure,
   viii) Meals for Special occasions.

Preservation of foods, causes of deterioration and its prevention, Prevention of deterioration, proper storage drying methods. Preservation by use of salt, sugar, oil vinegar and by use of chemicals.

**Practicals:**

Max. Marks 15

Planning ordering, preparing and serving of balanced meals for the following:

1. Different age groups:
(a) Children,  
(b) Adolescent,  
(c) Adult, manual and intellectual worker.

2. Different income groups:  
(a) Labourer and peasant;  
(b) Middle class.

3. (a) For pregnant and lactating mother.  
(b) Under weight and over weight.

4. Ailments:  
(a) Diarrhoea and Dysentery,  
(b) Fevers,  
(c) Diabetes,  
(d) Blood Pressure (High and Low).

5. Special occasions:  
(1) Holl festivals,  
(2) Diwali dinner,  
(3) Picnic lunch.

Course IV-Child Development and Family Relationship.

1. Growth and Development;  
(a) Principles of Development,  
(b) Stages of Growth,  
(c) Heredity and Environment,  
(d) Maturation and Learning,  
(§) Importance of the study of child development.
II. Psychological basis of heredity. Importance and methods improving environments.

III. Physical Development:
   (a) Mental Development,
   (b) Physical Growth of the pre-school child,
   (c) Factors which influence growth of the pre-school child health, nutrition and diseases.

IV. Motor Development:
   (a) Development of motor skills.
   (b) Sensory motor development.
   (c) Factors which influence growth (visits and observation in Nursery schools).

V. Emotional Development:
   (a) Meaning, definition, importance of emotions and their relationship to total growth.
   (b) Emotional maturity.
   (c) Basic emotions and needs (fear, anger, jealousy, joy, pleasure, curiosity, love).
   (d)

VI. Language Development:
   (a) Importance of language.
   (b) Stages of language development, comprehension, building Vocabulary, framing sentences.
(c) Development of thinking and reasoning.
(d) Factors influencing language development.

VII Social Development:

(a) Stages of socialisation.
(b) Socialising agents - family, school, community.
(c) Developing social and personal values.

VIII Play:

(a) Importance of play for growth.
(b) Value of Play.
(c) Relationship of play for different aspects of growth, physical, motor, creative, self experience, imagination.
(d) Type of plays, characteristics and stages in terms of specific age groups.

IX Family Relationships:

(a) Parent child relationship.
(b) Family experience and personality development.
(c) Child rearing patterns.
(d) Responsibilities of parenthood.
(e) Attitude of parents and relationship of this to personality.
X. Mental Hygiene:

(a) Meaning and importance of mental hygiene.
(b) Factors which contribute towards mental hygiene.
(c) Defence mechanisms.
(d) Factors which influence personality development.
(e) Causes of problems behaviour-characteristics problems of specific age-groups and ways of dealing with them.
(f) Exceptional children - gifted, backward, mal-adjusted, handicapped.

Practicals:

1. Preparation of baby's food.
2. Preparation and serving of food for children below 5 years.
3. Planning and preparation of Children's birthday parties.
4. Guided visits to creche (if exists nursery Schools maternity and child welfare centres or maternity and children-ward in case child welfare centres do not exist).
HOME SCIENCE: FIRST DEGREE ARTS (THREE YEAR) COURSE:

The only specimen of a three years First Degree Course in Home Science under the Faculty of Arts is the one prescribed by the University of Rajasthan. Obviously, this curriculum offers a very rich variety of Home Science Course at an Arts Degree level. It covers 'Household Economics & Textiles' and 'Health Science (Human Physiology)' in the first year, 'Food and Nutrition' and 'Health Science (Hygiene and Public Health)'; and 'Mother Craft and Child Care' during the second, while 'Home Management and Laundry Works' and 'Child Development Child Psychology and Family Relationship' during the third or final year of the course. A casual view of this curriculum would confirm that it seeks to offer, to a greater or smaller measure, most of what is contained in two year First Degree Arts Course in Home Science in the Universities of Kanpur, Agra and Meerut in Uttar Pradesh.

Over and above, it includes additional elements like the basic laws of economics, Household purchases, cost and utility; history of textiles and fabrics; Human Physiology particularly from the biological point of view; Diet Planning Public Health & Hygiene, water supply, Disposal of waste, Sanitation, Health Services, Home Nursing and First Aid, Family Aid, Family life cycle, Landlord-tenant Relationships, Heating and Cooling Arrangements including Air
Conditioning, Management of Time and Energy, Place of Women in Society, Population Problems, Need of Family Planning, etc., coupled with a sufficiently heavy doze of practical work in craft and clothing construction, cookery etc., during the course of 3 years.

Nonetheless, there are certain items in the Meerut curriculum which would stand unique even in their comparison to the Rajasthan curriculum. For example, one would not notice in the latter the treatment given to the concept of Housing in the former curriculum. It is items like these which go to make the Meerut Curriculum more functional in the modern context of Home Science. Similarly, paper on Child Development and Family Relationship of Meerut presents a comprehensive view on Child Development and Maturation rather than merely biological view presented in the Rajasthan curriculum.

Nevertheless, the three years curriculum of Home Science of the Arts Faculty of Rajasthan seeks to present, in a way, an integrated approach in the teaching of Home Science drawing upon subjects like Economics, Psychology, Biology, Natural & Physical Sciences, History, Commerce, Agriculture, Nursing, Medicine and a host of crafts and Art work and is as such definitely a higher level course. To have a fuller view of the course, the curriculum is presented herewith.
There shall be two papers.

**Paper I - Household Economics and Textiles.**

**Section A - Household Economics**

(Only elementary knowledge of economic principles is required).

1. **Scope of the Subject.**
   Advantages of Planned Family Living.

2. **Human Wants.**
   Nature
   Necessities, Comforts, Luxuries, Satisfaction.
   Their application to home,
   Principle of Equi-Marginal Utility.
   Wealth and its meaning.
   Material items.
   Personal items.
   Personal Satisfaction.
   Personal Relationship.

3. **Standard of Living.**
   Constituents of the Standard of Living.
   Different standards of living:
   In management of economic resources of individual families.
   In use of national resources.
How to achieve better standards of living.

Government programmes.

4. Family Income.
   Types: Money & Real, Total & net.
   Sources.
   Methods of supplementing family income.
   Subsidiary occupations.
   Contribution by members of the family besides the wage earner.

5. Family Expenditure.
   Importance of planned household budget.
   Family Budget.
   Budget Planning for different income levels.
   Engel's Law of Consumption.

   Need.
   Methods of keeping household accounts and bank accounts.

7. Savings and their investment.
   The Family Capital.
   Cash, Property, Jewels, Stocks, Shares etc.
   Need for saving.
   Methods of saving.

22. Rajasthan University: Three Years Degree Course (B.A.) in Home Science.
Institutions for small and big savings (Just the information necessary for the house wife is required).

Savings Bank Post Office,
Co-operative Credit Society,
National Saving Certificate,
Bonds, Stocks and Shares,
Insurance Types,
Best Type of investment for the family.
Inheritance and Bequest.

   When, Where and How to purchase.
   Markets.
   Wholesale and Retail
   Consumer's Co-operative Stores, Fairs
   Vendors, Hawkers, Pedlars.
   Purchasing.
   Cash and Credit-uses, problems, hazards
   whole-sale, retail and instalment
   Comparative advantages.
   Annual, monthly, weekly and daily purchases.
   Economy in purchasing.

9. Comparison of cost and utility of
   Ready-made, Ordered and Home-made goods.
   Knowledge of weights and measures.
   Programme to protect the consumers.
   Elementary knowledge of
   Control of Prices.
Establishing standards of products.
Labelling,
Prohibiting adulteration practices.

Section B- Textiles

1. Introduction to Textile Fibres
   Classification
   (i) Natural
       Cellulose, Protein, Mineral
   (ii) Synthetic.
       Elementary Study
       Origin, Manufacture, general characteristics,
       Simple identification tests.

2. Elementary knowledge of construction of Textile Fabrics.
   Technical meaning of Fabric, Yarn Weaving Knitting and Felting,
   Yarn construction,
   Spinning methods,
   Size and Count of yarn,
   Single strand yarn, ply yarn, complex yarns,
   Weaving,
   Meaning of technical terms used in weaving,
   Warp, Weft or Woof, Selvage, Count of cloth,
   Balance of Cloth,
   Kinds of Weave.
   Plain, Twill, Floating, Fancy.
Examples of fabrics of each kind;
Finishing,
Objectives,
Finishing processes,
Elementary study of processes such as-
Crease-resistant finish, Fire-proof finish,
Sizing and Weighting of silk & wood,
Dyeing & Printing
Processes
Yarn Dyeing, Tie & Dye, Batik
Printing-Roller, Block, Stencil, Screen, Discharge,
Simple Testing of fabrics for
Weave, fastness of colour, shrinkage.

3. Elementary knowledge of the history of:-
   (a) Cotton, Muslins, Silks and Brocades,
   (b) Tie and Dye.

4. Selection of fabrics for various uses in the home,
   Garments, Household linen, Upholstering and Furnishing.

Keeping in view-
   (i) Climate and weather conditions,
       Comfort, Utility, Occasion, Personality, Economy,
       expression of beauty,
   (ii) Fibre, Weave, Finish, Colour, Design.
PRACTICAL

Needle-Craft and Clothing Construction.

Practical Examination will be held in the Final Year. Work will be continued in the Second and Third Year also.

1. Equipment.
   Sewing and Embroidery Kit.
   Iron and Ironing Board.

2. Sewing machine.
   Knowledge of parts.
   Use and care.
   Correction of Machining faults.
   Use of sewing machine attachments.

3. Stitches in Needle craft.
   Basic: Tacking, Hemming, Back.
   Decorative: Stem, Blanket, Chain, Lazy-daizy, Long and Short, Satin, Cross, Herringbone, Feather, Hem, Seeding etc.

4. Embroidery.
   Study of designs.
   Selection of colours and stitches.
   Transfer of patterns.
   Special types of Embroidery.
   Drawn-thread, Applique, Cross-stitch, Cut work,
Shadow work, Chicken work, Mirror work, Bead work, smocking, Quilting etc.
Crochet work.

Note: The student may choose any four types of work from the above list and may work on Table cloth, Tray cover and Tea cosy, Cushion cover, Dâchesse set, Luncheon set, Hand bag or any other article.

5. Knitting of the following garments:
   Baby-suit, Lady's cardigan, Gents pullover,
   Stocks on two and four needles.

   (Mostly to be taught while stitching garments.)

   Seams and Seam finishes
   Plain-finished by over casting, binding, turning and stitching, pinking;
   French, Run and fell, Lapped, Counter, Darts,
   Pleats,
       Knife, Box, Kich
   Tucks,
       Plan, Corded, Shell
   Gathers,
       Setting of gathers into a band.
Finishing of raw edges.
    Turning down a hem, False hemming.
    Binding, Piping (cutting and application).
    Beading, Whippering.

Placket Opening.
    Continuous warp, Single hemmed.
    Two piece placket, Seam placket.
    Hound placket.
    Opening with a zipp fastener.
    Gussetion opening.

Sewing of fasteners.
    Buttons, Hooks, and eyes, Press studies.
    Trapes or ties, Looped fastenings.
    Ripp.
    Making of stitched eyelet and button hole.

Fitting of curtain rings and rails.

Mending,
    Patching—plain, print patch, fusible patch.

7. Dress Making,
    Taking body measurement.
    Principles of drafting and cutting.
    Drafting on paper.
    Preparation of fabric, straightening, Shrinking,
    Pressing.
Placing of pattern.
Economy in Cloth
Problems presented by stripes, designs, places etc.
Marking.
Cutting.

Drafting, Cutting and Sewing of the following garments—
(a) Children.
Layette, Diaper, Jhabla, Chaddi, Romper, Baby suit,
Frok-Petticoat and Frock,
Blouse and Skirt.

(b) Lady's
Salwar (Loose and Churidar)
Sari-petticoat and Blouse.

(c) Gent's
Payjamas (Loose and Churidar)
Kurta, Shirt (for boy 6-12)

Foods and Nutrition

Note:— The study will be started in the First Year, but
the examination will be held in the Second Year.

The meaning of Foods and Nutrition
Definitions of Foods, Nutrition, Dietetics and
Nutrients.
Functions of Food

Physiological Classification of Food,
Body building,
Energy yielding,
Protective and regulatory.

The Meaning of Metabolism, Anabolism and Katabolism.
Chemical classification of Good Nutrients.

Proteins, Carbohydrates:
An elementary knowledge of their composition, classification, functions in body, daily allowances, sources and deficiency symptoms.

Minerals
Nature and distribution.
A study of functions, daily allowances, food sources and deficiency symptoms of:
Calcium, Phosphorus, Iron, Iodine and Flourine.
Role of Sodium, Potassium, Copper and Sulphur.

Vitamins
Definition and Nomenclature,
A study of functions, daily allowances, stability, food sources and effects of deficiency of the various vitamins.

Water
Distribution in the body.
Functions, sources, Avenues of water loss, mechanism of water balance and daily allowances.

Study of common article of diet.

Nutrients present, Caloric Value.
(Only comparative study from tables is required)
Role of each in diet.
Cereals.
Pulses, Nuts and Seeds.
Fruits and Vegetables—importance of salads.
Meat and Fish.
Eggs.
Milk and milk products.
Spices and Condiments.

Cooking

Effects of Cooking on food.
Methods of Cooking.
Nutritive losses in different methods.
Methods to conserve nutritive value of good.

Practical : Cookery
(To be included in the Cookery Examination in the Final Year)

Cooking and serving of:

Ordinary daily meals
Rice, Khichri, Taheri(Pulao), Dal, Vegetables,
Phulka, Paratha, Puri.
Raita, Chatni, Salad dish,
Sweet dish, Kheer or Phirni.

Small snacks
Sandwiches, Toasts, Wafers, Pakoras
Mathri, Halva

Simple egg preparations
Invalid dishes
Soft Khichri, Dalia, Soups

Beverages
Tea, Lassi, Shikanji.

Paper II - Health Science (Human Physiology):
(An elementary treatment of the subject is expected).

1. Factors essential for life.
The organisation of the body
Cell, Tissues, Organs and System.

2. The Skeleton.
Functions.
Main bones.
Peculiarities of the child's skeleton.
Factors necessary for the formation of strong bones.
3. The Joints and the Muscles.
   Type of joints (illustrated by common examples)
   Structure of typical Synovial Joint.
   Levers of the body.
   Value of Muscular exercise.
   Fatigue and rest.

4. The Respiratory System
   Purpose of Respiration.
   Anatomy of the Respiratory organs.
   Mechanism of breathing.
   External and Tissue Respiration.
   Composition of inspired and expired air.
   Vital Capacity.
   Regulation of breathing.
   Proper breathing habits.

5. The Vascular System
   (i) The Blood
      Composition and Functions.
      Clothing of blood.
      Blood groups, Blood transfusion, Blood Bank.
   
   (ii) The Heart and the Blood Vessels
      Structure.
Cardiac cycle.
Courses of circulation of blood.
Blood pressure and Pulse.
Regulation of blood-supply.
Weak-heart and its limitations.

(iii) The Lymphatic System.
Tissue-fluid and Lymph.
Lymphatic vessels and glands.
Spleen-structure and functions.

6. The Digestive System.
Purpose of Digestion.
Anatomy of the Digestive organs.
Mechanism of Digestion.
Absorption of digested food.
Metabolism of Carbohydrates, Fats and Proteins.
Proper eating habits.

N.B.:- Foods and Nutrition is a separate paper and need not be dealt there.

7. The Excretory Systems.
The Organs of Excretion.
The Urinary Systems.
Organs forming the urinary System.
The Kidney-structure and functions.
Composition of urine.
Effects of diet, fluids, stimulants, exercise, climate etc. on secretion of urine.
The Skin
Structure and functions.
Regulation of body temperature
Cleanliness and Care of skin.

8. The Nervous System
Cerebro-spinal Nervous system
Brain, Spinal Nervous system
Structure and functions.

The Sense Organs
The Eye
Structure and functions.
Normal vision, accommodation.
Defects of vision and their corrections.
Care of the eyes.
Cause and avoidance of eye strain.

The Ear
Structure and functions.
Causes of deafness, Hearing aids.
Care.

Organs of Taste and Smell
Structure and functions.

Autonomic Nervous System
Sympathetic and Parasympathetic.
Structure and functions.
9. The Endocrine System

The Important Ductless glands of the body,
Hormones and their role in life,
Effects of over and under activity.

Second Year (Home Science)

There shall be two theory papers each of 3 hours
duration and a practical examination.

Paper I - Foods and Nutrition 100 marks
Paper II - Health Science 75 marks

Section A - Hygiene and
Public Health 50 marks
Section B - Mother Craft &
Child Care 25 marks

Practical examination.
First Aid and Home Nursing 25 marks

Note- The study of Home-management will start in the
Second Year and shall be continued in the Final
Year. The Final Year Examination will include
questions from the whole course of Home-management.

Paper I - Foods and Nutrition:
This paper will also include topics prescribed
under Foods and Nutrition for the First Year B.A. (Pass)
class.
I. Energy Metabolism:
   Unit of Measurement—Calorie.
   Physiologic fuel factors.
   Factors affecting total energy requirements of the body:
   Basal Metabolic Rate.
   Muscular activity, mental stress.
   Specific Dynamic Action of Food.
   Climatic conditions.
   Rate of growth.
   Daily allowances and Reference Standards.
   Adjustments for body size, age, climate & activity.

II. Meal Management:
   Resources, goals and values.
   Advantages of Meal Planning.
   Planning for good nutrition.
   (1) Balanced Diet:
       Importance and essential constituents.
       Recommended daily allowances for various age group.
       Sample diet by I.C.M.R.
   (2) Matching meals to the:
       Food budget—family income
       Composition of family
       Other factors affecting food budget
       Characteristics of & sample meals for low cost,
       moderate cost and liberal food budgets,
       Ways of effecting economy.
(3) Matching meals to available time and energy
Effective management.

(4) Mean Planning - Factors to be considered
Physiological satisfaction - Hunger and appetite
Satiety value
Appeal
Appearance
Taste, Aroma and flavour
Texture and Temperature
Availability of food stuff
Composition of family
Tradition
Likes and Dislikes
Availability of time and energy
Cooking methods
Food budget
Characteristics and Sample menus of
Breakfast, lunch, dinner and in between meals.
Food fads and fallacies

III. Diet Planning with reference to special individual requirements.

Pregnancy and Lactation
Nutritional requirements
Sample meal
Diet during minor digestive complications of pregnancy.
Infancy

Breast and Artificial feeding

Comparison of human and cow's milk

Quantity and Schedule.

Preparation of formula

Cow's milk and Patent milk foods,

Food Supplements at various stages.

Weaning and mixed feeding

Establishment of good food habits.

Adequacy of feeding.

General guiding factors.

Test feeds.

Children and teenagers

Nutritional requirements.

Diets for pre-school, school going and Teenagers

Establishment of good habits

School lunch programme

Old age

Physiological and Nutritional Changes

Dietary allowances.

IV. Therapeutic Nutrition

Purpose of diet therapy

Soft, semiliquid and liquid diets.

Etiology, Symptoms and principles of feeding in -

Acute fevers

Digestive disorders
dyspepsia, constipation, diarrhoea, peptic ulcer.
Liver diseases
Diabetes
Overweight and Underweight
Deficiency diseases

V. Meaning of Good Nutrition
Evaluation of good nutrition.
Malnutrition.
Detection, causes and treatment. Steps taken by the Govt. for prevention.

Applied Nutrition Programme.
Meaning and operation.

VI. Food Preservation
Factors contributing to food spoilage.
Principles and techniques used in various methods of cooking, canning, bottling, pasteurisation, cold storage and refrigeration.
Drying and Dehydration.
Chemical preservation.
Use of antibiotics.
Use of irradiation.

Practicals Cookery

Preparation of
Puri, Kachori, Pulao, Sweet-rice, Curries, Kofta,
Raita, Shrākhand,
Salad decorations, Fruit Salad.
Pudding (custard, Jelly or any other choice),

Preparation of Sweets and Namkins.
Samosa, Khasta Kachori, Sev, Chevra, Chop,
Cutlets, Barfi, Gunja, Gulab Jamun, Laddoo.

Invalid Dishes.
Barley water, sago, Suji, Soups.

Beverages.
Tea, Coffee, Cocoa,
Fruit-Juices, Milk-shakes, Sherbats.

Preparation of
Biscuits, Cakes, Pastries, Ice-cream.

Preparation of
Chat, Dahibara, Pani-batasa, Alu-chools,
Potato Chops etc.

Preparation of
Achar, Murrabba, Chatney, Sauces,
Jams, Papad, Mangori, Bari,
Preparation of two special dishes of any province.

Health Sciences
Section A
Hygiene and Public Health
1. Concept and Significance of Health,
2. Air and Ventilation.
Composition of Air, Physical properties, Impurities in Air,
Sources and their effects on Health.
Natural purification.
Principles and methods of ventilation
(with special reference to India.)

Effects of defective ventilation and over-crowding on health.
Simple tests for effectiveness of ventilation.
Keta-Thermometer.

Quantity necessary for healthy living.
Impurities in Water.
Sources and effects on health.
Hard and soft water.
Methods of Softening hard water.

Sources of Water-supply with reference to their suitability.
Purification of water.
Domestic and on large scale.
Distribution of water.
Storage of water in homes.
Pollution of water.
Standard of purity of water-supply.
Refuse-collection, removal and disposal,
Human Excreta—
(a) Dry Conservancy System,
Types of Latrines,
Collection of Night Soil,
Disposal,
Disposal,
Disadvantages of hand removal system.

(b) Water carriage system,
Sanitary fittings,
Disposal of sewage,
Advantages of water-carriage system.

Waste-water-Removal and Disposal.

5. Bacteriology and Infections.
Micro organism—Bacteria, Protozoa, Fungi & Moulds.
Bacteria,
General Characteristics,
Mode of life,
Classes—Cocci, Bacilli, Vibrios, Spirilla,
Spirochaetes and Viruses,
Role of Bacteria in everyday life.

Works of Jenner, Pasteur, Koch, Lister,
Behring, Ross and Fleming.
Infection.

Sources of disease producing microbes.
Modes of entry into body; Channels of infection.
Modes of transmission of infection.
Susceptibility and Immunity.
Stages following infection.
Restraint of infection—general measures.

Infectious Diseases.

Study of the following infectious diseases as regards their symptoms, causes, modes of transmission, incubation and infective periods.

Methods of protection and prevention of spread of infection.

Small-pox, Chicken-pox, Measles.
Common cold, Influenza, Diptheria.
Whooping-cough.
Mumps, Poliomyelitis, Tuberculosis.

Enteric group of fevers, Cholera, Dysentry, Diarrhoea, Worm infections (life history of common parasitic worms, mode of infection & prevention).

Malaria, Plague, Hydrophobia, Tetanus, Leprosy, Scabies, Ringworm, Trachoma.

School Hygiene.

School Building.

Class-room-size, ventilation and lighting, arrangement of desks, seats and black boards.
Sanitary conveniences, Provision of drinking water.
Canteens, Playground.
Measures for Health protection.

Unhygienic condition of villages in India.
Hygienic Planning
Water supply and rural Sanitation.
Health Service - Health and Mobile Units;

8. India's Health Services.
Municipal & District Public Health departments
Health Centres & Clinics.
Place and Sphere of dispensaries, Hospitals, Sanatoria,
Homes for cripples, Asylums etc.
Internal Assistance,
W.H.O., UNICEF, T.C.M.
Red Cross Society
Health Education.

9. Health problems of India.
Poor Health Standards - Causes.
Health programmes.

Section 8
Mother Craft and Child Care

2. Physiology of Reproduction.
   production of Ova and Sperm.
   Menstrual Cycle,
Implmentation and pregnancy.
3. Symptoms and signs of pregnancy.
4. Care of the expectant mother.

Ante-natal, hygiene—advice regarding

Diet, Dress, Cleanliness—baths.
Exercise, Rest and sleep.
Regulation of bowels.
Care of teeth.
Care of breasts.
Mental hygiene.
Regular medical check-up for satisfactory progress
and to detect signs of abnormality.

Common disturbances during pregnancy and their
management—

Morning sickness, Heart-burn, Indigestion
Constipation, Piles, Varicose veins,
Cramps, Sleeplessness, Frequency of micturition
Ledema,
Toxaemias of pregnancy—Symptoms, detection and care.

Pernicious vomiting of pregnancy.
Albuminuria.
Pre-eclamptic state and Eclampsia.
Acute yellow atrophy of liver.
Abortion & Miscarriage

Threatened, Inevitable, Complete, Incomplete
Missed and Repeated.

Symptoms
Importance of immediate attention
Care until medical attention available.

Symptoms and signs calling for
Immediate medical attention.
Ante-natal clinics and their importance.

5. Preparation for confinement and arrival of the new born.

Confinement at home
Importance of having trained assistance
When to call in assistance

Confinement in maternity home and hospital
Advantages
When to shift.

6. Care during puerperium (Lying in period)
Precautions to avoid sepsis
Recording of temperature, pulse, involution of
uterus and any abnormal symptoms or signs.

Management of
Diet, bowels, retention of urine
Rest and sleep
Care of preasts and feeding of the baby
Exercise during lying-in-period.
Ambulation
Mental out-look
Puerperal sepsis-causes and prevention
Infections of the breast-causes and prevention
Engorged breast, Cracked nipples, Abscess

7. Post-natal care
   Diet, exercise, rest and sleep
   Clothing, feeding of the infant
   Return to normal activity.

8. Family Planning and Birth control.

9. Care of the new-born and the young baby
   Feeding,
   Breast feeding
   Importance
   Management: Preparation, position, time schedule
   Causes of insufficient supply of breast-milk and
   its management.
   Test feeds
   Artificial feeding
   Feeding equipment, its care
   Preparation of the feeds—cow’s and patent
   Quantity necessary
   Technique of bottle feeding
   Time schedule
   Methods of making cow’s milk more digestive
Mixed feeding

Food supplements at various stages

Does the diet suit?

Points to be noted

Digestive disturbance during infancy and their management.

Diarrhoea—simple—form errors of diet

Acute gastro-enteritis (Summer diarrhoea)

Constipation, Vomiting, Flatulence

Intestinal colic

Bathing, Toilet, Care of the umbilicus in the newly born

Clothing

Importance of fresh air and sunshine

Proper habit formation with regard to eating, sleeping, elimination, posture, cleanliness.

Health protection

Vaccination, Inoculation

Minor ailments during infancy and their management

Digestive (See under feeding)

Malnutrition, Marasmus

Napkin rashes

Umbilical infection

Infection of the eyes

Jaundice, swelling of the breast (in the newly born)

Role of child welfare clinics

10. Safety measures for prevention of common accidents in the home.
Practicals—First aid Home Nursing.

First aid

Common Home Accidents and their prevention

First aid treatment for the following:

- Burns and scalds.
- Cuts and wounds.
- Sprains, Fractures and Dislocation.
- Haemorrhage.
- Unconsciousness
- Fits and Covulsions
- Drowning
- Electric Shock
- Heat-stroke and Frost bite.
- Insect and Animal bites
- Foreign body in Eye, Ear, Nose and Throat
- Poisoning

Common poisons and their anti-dotes.

First-aid Box

Home-Nursing

Room for the sick.

Care of the Sick with special emphasis on the
Care and isolation of an infections case at home.

Use of: Bed-pan, Urinal, Hot water bottle, Ice
- cap, Spittoon Bed-crable, Back-rest,
- Bed-table, Measuring glasses,
- Thermometer.

(Recording of Temperature; pulse and
respiration etc.)
Administering treatments

Preparation and administration of-

- Enemas
- Poultices and fomentation,
- Cold compresses,
- Inhalations.

Dressing of Simple wounds,

Preparation and arrangement of the room for confinement.

Nursing of the mother and child during the period.

Treatment of Minor ailments.

- Headache, digestive ailments (Indigestion, Prickly heat, Sore eyes, etc.
- Use of common drugs, antisepsics and disinfectants
- Practical methods of disinfection.
- Home medicine Chess.

HOME Management

There shall be no University Examination in the Second Year. The Final Year Examination will include questions on topics prescribed for study in the Second Year.

I. Home Management—Definition and Concept

(a) Concept of philosophy of family living, resources, values, goals and standards. Their role in Home Management.
(b) Processes of Home Management—Planning, Controlling and Evaluation.

(c) Qualities of a good Home Maker.

II. Home Maker—General Responsibilities
(a) Development of a sound philosophy of living and establishment of realistic goals.
(b) Those concerned with providing opportunities for growth and development of all family members.
(c) Those concerned with Managerial tasks.
(d) Those concerned with Physical tasks.
(e) Those concerned with interest and participation of family in Community Activities.

III. House—Care and Maintenance.
(a) Daily, Periodical and Annual Care.
(b) Special methods of Cleaning and Polishing wood, metals, glass, china, leather, floors and floor coverings.
(c) Stocking and Storing
   (i) Principles of Stocking and Storing.
   (ii) Storage materials—Cupboards, Jars, Bottles, Tins etc.
   (iii) Storage of clothing, household linen, woolens, seasonal bedding, food supplies.
(d) Control and eradication of household pests—flies, mosquitoes, bed bugs, termites, cockroaches, moths, weevils, rats.
IV. Household Appliances

Working, use and care of irons, hot-plates and ovens, immersion and instant water heaters, geysers, refrigerators, mixies, grinders, taps and flush tanks.

V. Public Utilities

(a) Water and Electricity supplies—Reading of Meters.
(b) Elementary knowledge regarding usage of Posts and Telegraphs, Telephone, Transport, Banks.

Practicals:

1. Home Management

(a) Cleaning and Polishing of wood, metal, glass, china leather, floor and floor coverings.
(b) Use of household appliances.
(c) Common defects in household appliances and their correction.
   (i) Renewing a burnt-out fuse
   (ii) Connecting an electric plug
   (iii) Fitting a new washer
   (iv) Correcting a leaking flush
   (v) Opening a blocked flush
   (vi) Opening a clogged sink.

Needle-Craft and Tailoring

There will be no University Examination in Second Year.
Examination will be held in the Final year.

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Final Year (Home Science)

There will be two theory papers each of 3 hours duration and each carrying 50 marks and practical examination carrying 100 marks.

Paper I. Home Management and Laundry Work 50 marks

Paper II. Child Development, Child Psychology and Family Relationship 50 marks

Practical Tests in:-

(i) Needle Craft and Clothing Construction
3 hours. Total marks. Marks for sessional work.
40 20

(ii) Foods and Nutrition.
4 hours. Total marks. Marks for sessional work.
30 10

(iii) Home Management and Laundry Work
3 hours. Total marks. Marks for sessional work.
30 10

Notes:- In the case of private candidates (Unless the practical work is done under the guidance of qualified teachers of the Department of Home Science in any of the constituent/affiliated colleges and is certified by the Head of the
Department and the Head of the institution
no sessional marks will be given. The practical
tests, in their case, shall be marked out of
the total marks allotted for the tests inclusive
of sessional.

Paper I. **Home Management and Laundry Work.**

Note: The paper will also include topics prescribed
under Home-management Course for the Second
Year Class of the previous Year.

1. Family Life Cycle:
   Relations of States in the family life cycle to
management resources - money, time, energy housing.

Family Housing:
   A. Selection and Planning
   (a) Functions of a house.
   (b) Points to be Considered in selection.
      Location
      Minimum housing needs of the family ... provi-
      ding adequate facilities for work, rest, safety,
      privacy, comfort and convenience.

Health Considerations:
   Environment, Aspect
   Construction with reference to foundation, flooring,
   walls, roof, drains, protection from pests.
   (Details are not needed)
   Ventilation and lighting
   Sanitary provisions
Aesthetic Considerations
Budget allowance

Landlord-tenant relationship

(c) Owning and renting a house

Advantages and disadvantages

Business aspects

(d) Study and preparation of plans of houses for different income level groups.

(i) Provision of areas for various activities in the house.

- Reception of visitors and quests. Study, Children, Rest and Sleep, Prayer, Cooking, Washing of utensils and dishes.

- Toilet-dressing, bath and lavatory, laundry

- Storing space for water, fuel, food-supplies, utensils, crockery, clothing and household, linen, cleaning and other equipment.

- Leisure time activities and hobbies.

(ii) Combination of areas into rooms - room placement.

(iii) Planning pathways, corridors, staircases, placing of doors and windows.

(iv) Planning Electrical Fittings.

- Plumbing and Air-Conditioning.

(v) Planning layout of Compound paths, lawns, flower and kitchen garden, trees.
B. Furnishing, Arrangement and Decoration of the Home:

(a) Fundamentals of art in relation to home,
Harmony, proportion, Balance, Rhythm,
Emphasis, Design, Colour and Line principle,
and their application in home decoration
Working out different colour-Schemes.

(b) Furnishing, Arrangement and Decoration of
various rooms and areas provided in the house:-
Drawing, Dining, Bed, Study, Nursery, Dressing,
Guest, Sick.

One-room apartment.

Combining, beauty, utility, comfort and convenience
and taking into consideration the family income.

(c) Heating and Cooling arrangement.

Air Conditioners - knowledge to be based on
Indian makes.

(d) The Kitchen and Kitchen-Store

Equipment.
Different types of fuel and Cooking apparatus
(a comparative study)
Cooking and eating vessels
Storing equipment
Cooking gadgets

Time and Labour Saving
Refrigerator, Ice-box, Hot-case
Washing-up

Equipment arrangement
Combining convenience, safety, efficiency
order and attractiveness

The Ideal Kitchen

(e) The Bathroom and Dressing space
Equipment and arrangement

(f) Verandahs and Courtyards

Management of Time:

(a) Concept of time as a resource
(b) Balance in the use of time in work
(c) Concept of time costs and time patterns of various activities.

Use of Time Study.

(d) Tools in Time Management
   (i) Peak loads and their reduction
   (ii) Work curves...typical, good and poor
   (iii) Rest periods—length and frequency

(e) Process of managing time
   (i) Coordinating individual and family activities
   (ii) Planning, Controlling and Evaluating
Management of Energy:

(a) Fatigue
   Concept and types—Physiological, psychological frustration.

(b) Process of managing Energy.
   (i) Planning
   (ii) Controlling
       Knowledge of body mechanics
       Posture
       Effective use of muscles, rhythm
       Centre of gravity, momentum.
   (iii) Evaluation.
   (iv) Avoidance of fatigue
   (v) Work simplification.
       Work sequence,
       Storage space, Equipment,
       The worker, Work place
       Techniques of work Simplification.

5. Women and Society.

(a) Changing status of women during the post-independence years, Education, Career opportunities.
    Position in the family, Social and Legal Status.
(b) Laws for the benefit of Indian women, connected with—
Child marriage, Dowry, Polygamy, Separation, 
Divorce, Remarriage, 
Inheritance
Bequeathals—Wills and Trusts

(c) Harmful Society Customs

(d) Population problems, Need for family planning.

Laundry Work.

1. Laundry material and equipment.
   Water
   Hard and Soft
   Disadvantages of hard water in laundry work
   Softening of water
   Other values of water in washing

Cleaning materials
   Selection and use
   Soaps—bar, Powder, Flakes & Solutions,
   Rina-nut, Shikakai
   Other cleaning agents.

Stiffening agents
   Starches - Kinds, preparation and use,
Whitening agents

Blues, Tinopal etc., their use

Bleaching agents

Oxidising and reducing Bleaches

Grease Removers

Solvents and absorbants

Other Laundry Reagents

Washing soda, Borax, Ammonium carbonate,

Oxalic acid, Acetic acid, Vinegar etc.

Laundry Equipment

Boiler

Sink, Tubs & Buckets

Enamel bowls and Basins

Scrubbing brushes

Scrubbing board

Suction Washer

Spoon Wooden & metal

Containers Bottles & Jars for reagents

Drying rack, Clothe's Line

Iron

Ironing and sleeve boards

2. Stain Removing

General rules;

Removal of following stains,

Blood, Grease, Curry, Fruit, Ink,

Lodine, Iron rust, Paint & Varnish

Perspiration, Shoe-Polish.
3. Laundering Principles
Washing, Boiling, Rinsing, Drying,
Blueing, Starching, Folding and Ironing.

4. Simple dry cleaning at home
Dry Cleaning Reagents
General Rules

5. Washing by electricity
The electric washing: use and care.


7. Storage of Laundered Cloths.


1. Meaning, scope and significance of Child Psychology.
2. Methods of child study
3. Heredity and Environment
   Elements of Psychological basis of heredity
   Social heredity
   Role of heredity and environment in the mental
development of child.
   Original nature.
   Methods of modifying original nature (Nature and Nurture).
   Stage of psychological adjustment of the child with the environment.
4. Perception
Forms & Characteristics of Perception—relation to sensation.
Errors of perception—illusions.
Training in perception.

5. Instincts
Definitions: Examples:
Classification
Instincts proper (General)
Innate Tendencies
Imitation, Play, Sympathy, Suggestion,
Tendency to seek pleasure & avoid pain.
Relation to emotions.
Methods of modifying innate tendencies

6. Emotions and Feelings
Differences between emotions and feelings
Characteristics of childhood emotions & feelings.
Common emotional patterns of childhood.
Fear, Anger, Jealousy, Joy, Pleasure,
Affections & Curiosity.

7. Imagination
Value of imagination.
Day-dreaming, fantasy, dreams.
Development and Training in child.
8. Attention and Interest
Forms, Span and Distribution.
Condition on which each depends.
Development & Training in child
Distribution.

9. Memory
Problems of memory
Memorising, Retention, Recall and Recognition
Conditions of good memory
Cause of forgetting
Training and improvement of memory

10. Thinking and Reasoning
Types
Formations of Concepts
Methods of developing and educating a child in
reasoning & thinking

11. Learning
Nature and Laws of Learning
Methods of learning
Characteristics of learning in a child.

12. Language Development
Stages of speech development—Comprehension,
building vocabulary, forming sentences, pronunciation.
13. Intelligence.
   Nature.
   Stages of development of intelligence in a child
   Methods of studying intelligence
   Measurement of intelligence at various age groups
   Intelligence Tests—Indian as well as Western.

14. Habits & Habit formation
   Condition of habit formation
   Importance of habit
   Training in good habits
   Breaking of bad habits

15. Play-activity
   Values of play in childhood
   Characteristics of play
   Kinds of play
      Free and spontaneous
      Make-believe
      Constructive
      Games, sports and amusement
   play activities of children of different age groups.

16. Sense and sense training—Acquisition of knowledge
   through the senses: Methods of sense training.
   Theories of play
   Modern methods of education
      Basic principles of Montessori, Kindergarten,
      Play-way.
17. Character Development
18. Personality Development
   Types of personality
   Factors of good personality
   Influence of factors
   Development and improvement of personality

19. Stages of child-development
   Child at birth
      The Physique of the newborn
      Sensory and motor responses
      Sleeping, crying and emotional behaviour
   Physical and Motor Development
      Weight, Height, Closure of fontanelle, Teething,
      Grasping, Holding the head, Sitting, Crawling,
      Creeping, Walking,
   Speech and language development,
   Emotions, Intellect, Behaviour pattern etc.
   Social development, Origin of social behaviour,
      choice of companions.

20. Child-parent relationship
   Responsibilities of parenthood
   Attitude of parents in laying foundation
      of personality development
      and good family relationship
   Guiding and directing the child's activities at
      home Planning hobbies for children.
Thumb-sucking, Nail biting, Enuresis.
Shyness, Left-handedness, Temper-Temperums
Speech disorders—stuttering and stammering
Feeble mindedness, Physical handicaps
Fear, jealousy, Telling lies, Destructive behaviour

22. Adolescence Problems.
Conflicts and adjustments at home, school and community
Mental Hygiene
Truancy and delinquency—causes, prevention and management.

23. Family Relationship
Basis for understanding human behaviour
Physical, Social and Psychological needs
Making adjustments
Ways of meeting situations
Running away, attacking, altering one's attitude
Balance in adjustment
Husband-wife relationship
Functions of marriage
Factors in establishing and maintaining a successful marriage
Adjustment to be made
Disintegrating forces
Differences in
Religion* Beliefs,
Values of life,
Temperament,
Nationality, Community and Caste
Socio economic influence
Career

Relationship with other members of the family

Problems—old age, unmarried women

Family Disorganisation

Causes

Agencies of family welfare

Family crisis management

Loss of economic support

Leave and prolonged illness

Bereavement

Family conflicts

Questions of remarriage, desertion and divorce

Practical Examinations

(i) Needle-Craft & Clothing Construction.

Needle Craft and Clothing Construction.

(ii) Cookery.

Refer the syllabus for the First Year Examination 1972 and Second Year Examination 1973 under Home-Science Practical—Cookery.
Planning preparation and Serving of:

(i) Breakfast, Tea, Lunch and Dinner

(ii) Meal for a family including
(a) Food suitable for old age
(b) Food suitable for a pre-school child
(c) Provision for increased requirement for the adolescent.

(iii) Meal to meet extra needs of pregnant and lactating mothers.

(iv) A low cost meal planned with special attention to the inclusion of foods which will prevent dietary deficiency diseases.

(v) A meal requiring special diets in
(a) diabetes
(b) digestive disorders and diseases
(c) Obesity

Fluid and soft diets

(vi) Meal for special occasions
(a) Tea, Luncheon, Dinner and After-dinner parties.
(b) Birth day party
(c) Journey
(d) Festival celebration

Stress to be laid on decoration, presentation and serving of food both in Indian and Western styles.

Option of vegetarian and non-vegetarian dishes allowed.
Home Management and Laundry work.

Laundry Work,
  Stain removal
  Laundering of
  Linen, woolen, silk and synthetic fabrics
  White and coloured (fast and non-fast)
  Garments.
  Special articles.
  Laces and borders.

B.4 HOME SCIENCE: FIRST DEGREE SCIENCE(TWO YEARS) COURSES:

Nagpur University Faculty of Science provides for a Two Year B.Sc. Course in Home Science which is open to those who have passed Intermediate in Home Science or Intermediate in Science with Physics and Chemistry, subject to their passing at least four papers (VI to IX) of the Intermediate in Home Science before appearing for the final B.Sc. (Home Science) Exam; or again Intermediate in Arts, subject to their passing at least Two Papers (IV & V) of the Intermediate Home Science before taking up the final B.Sc. (Home Science) Exam. Besides, those who have passed the B.Sc. Part I Examination with Physics and Chemistry are also eligible to join B.Sc (Home Science) Two years course. It is a typical Two year
course comprising three papers on Home Science viz 'Home Management, House-hold Equipment, Applied Art, Decoration and Home Furnishing'; 'Mother Craft, Child Development, Child Psychology, Family Relations and Care of Children'; and 'Crafts-laundry, cooking, Needle craft, Tailoring and Hand-craft', in addition to two general papers on 'Hygiene', Bacteriology and Preventive Medicine' and 'Food Nutrition and Dietetics' and a paper each on 'English' and 'Civics, Public Administration and Rural Welfare'. The Three Home Science papers seem to comprise contents of somewhat equivalent scope and value as of respective papers prescribed in the Two Year Arts Degree in Home Science of Agra or Kanpur University, and as such the details thereof could be safely ignored. However, the two general papers do contain certain items which could be taken as exclusive to this course. For example, School Hygiene or Principles of Immunology are neither included in the Two Year curriculum offered by Kanpur or Agra or Meerut University nor in the Three Year Course offered by Rajasthan University as discussed earlier. But in the ultimate analysis, the Two Year B.Sc. Home Science course is of a much lower consequence in comparison to the Rajasthan course of Three years Arts Degree in Home Science. Detailed curriculum of two general papers is given below:

23. Nagpur University Faculty of Science; Prospectus of the B.Sc. Examination in Home Science.
HYGIENE, BACTERIOLOGY AND PREVENTIVE MEDICINE

One Paper - Marks 50

(1) HYGIENE

Municipal and General Hygiene, Water supplies, Source of Water supply, Detection of pollution, Purification and Storage.

Sanitary appliances

Sewage disposal and the disposal of refuse in town and country.

Conservancy system.

Ventilation-Air composition, purities, pollution. Smoke-Danger to health, Value of Sunlight.

Disinfectants-Natural, artificial and chemical.

Housing Methods of heating, natural and artificial direct and indirect method of lighting, Natural and artificial sunlight.

Avoidance of dampness and its effects on health.

(2) PERSONAL HYGIENE

Necessity of cleanliness of body; Care of skin and its function, Care and protection of eyes, nose, hair, nails and teeth. Cleanliness of clothings and its materials etc.

Exercise, rest, posture, sleep and food.
Bathing—object; kinds of bath, how often, age, sex and occupation.

GENERAL PRINCIPLES OF PUBLIC HEALTH

Administration

Fairs and Festivals,
Markets
Village Sanitation
Rural Water Supply
Municipal and the District Health Staff, their duties
Birth and death rate
Vital statistics.

(3) DOMESTIC HYGIENE

Filters, Storage of foods, Removal of refuse,
Types of Latrines, Different types of refuse, Ways of collecting and disposing them.

(4) SCHOOL HYGIENE

School Buildings, Medical inspection of school children, School clinics, Diseases common to school going children, Infectious diseases and their prevention, Nature of infection, Methods of spread, Notifiable disease and the duty of public health staff, Epidemics and the detection of origin.

Methods of controlling and preventing infectious
diseases such as Notification, Isolation, Quarantine, Disinfection and immunisation - Vaccination, Inoculation and Anti-toxin.

COMMON INFECTIVE DISEASES

(a) Cholera, (b) Typhoid, (c) Dysentery, (d) Diarrhoea, (e) Small-pox, (f) Chicken-pox, (g) Measles, (h) Influenza, (i) Malaria, (j) T.B., (k) Plague, (l) Typhus, (m) Whooping Cough (n) Diphtheria, (o) Leprosy (p) Venereal disease and (q) Puerperal fever.

(5) MATERNITY & INFANT WELFARE WORK

Scheme of work in Rural and Urban areas.
Maternity mortality rate and its causes.
Infant mortality rate and its causes.
Maternity and Child Welfare Centre Homes and Hospitals.

Duties of Health Visitors-Antenatal hygiene, its importance and general outline of work, Infant Hygiene.

Breast Feeding-human milk, cow's milk, their composition, raw, pasteurised and dry milk, Methods of artificial feeding-disorders of nutrition and minor ailments including rickets scurvy, malnutrition, summer diarrhoea.
(6) HEIGHT AND WEIGHT

Its relation with age and sex, difference due to living and climatic conditions.

(7) Social CUSTOM

Child marriage, Purda system — its effect on health.

(8) PARASITOLOGY

Castodes, Nematodes, Trematodes in particular tape worm, Round Worm, Hook Worm, Thread Worm and Guinea Worm. Life history, mode of infection, Prevention Treatment.

PRACTICALS

(1) First aid.

(2) Common Poisons, their antidoes, managements of a case of poisoning, equipments of first aid, medicine chest.

(3) Practical demonstrations.

EXCURSIONS

(1) Inspection of Factories, Work-shops, Sewage farm, Water Works, Disinfecting Stations, Infections, Hospitals, Maternity and Child Welfare Centres and General Hospitals, Primary Schools and Private Places e.g. Fair, Bazar, Hotels, etc.
1. The origin and discovery of bacteria.
   (a) The Primitive world, (b) Natural Philosophy,
   (c) Are bacteria plants?

2. Structure and contents of the bacterial cell.
   (a) Cell, Wall, (b) Nucleus, (c) Cytoplasm,
   (d) Size, (e) Reproduction.

3. The Yeasts:— (a) Structure, (b) Activities of Yeasts.

4. The moulds:— (a) Structure, (b) Classification,
   (c) Habitats of moulds.
   (i) Genus Mucor, (ii) Genus Rhizopus, (iii) Genus
   Aspergillus, (iv) Genus Penicillium.

5. Transmission of Disease.
   Types of transmitting agency.

6. Principles of Immunology.
   (i) Mechanisms of protection.
   (a) Antigenus, (b) Cytolysins & Complements,
   (c) Agglutinins.

   (ii) Production of Immunity.

   (A) Artificial Immunity:— (a) Active Artificial
   Immunity,
   (b) Passive Artificial Immunity.

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(B) Natural Immunity: (a) Racial, (b) Acquired.

(C) Production of vaccines, Antitoxins, Antiserum.

7. (i) Sterilization and Disinfection.
   (A) Purposes.
   (B) Definition of Sterilization and Disinfection.

(ii) Sterilization by means of heat.
   (1) Boiling, (2) Live Steam, (3) Compressed Steam (4) Dry hot Air.

(iii) Sterilization by filtration.

(iv) Sterilization - Uses of Chemicals.

8. Microbiology of water.

9. Microbiology of Food stuffs.

10. Microbiology of Air.

11. Microbiology of Soil.

PRACTICAL WORK

Study of the Microscope:

1. The use of Microscope.
   How to find out the optical tube length.
2. Standardisation of the culture media.
3. P.H. Value determination.
5. Acid fast-Zeilt Naelson's Stain.
6. Microbiological examination of Water.
7. Microbiological examination of Milk.

FOOD-NUTRITION AND DIETETICS

One Paper : Marks 50

Digestion, Absorption and Metabolism of fats, Proteins, Carbohydrates, Important minerals in human body, Vitamins, Digestive juices, Enzymes, Ferments, Hormones, Chemistry of blood and urine and respiration.

Function of food in daily life, Proximate principles of food, Proteins, Fats, Carbohydrates, Vitamins and Minerals.

Factors affecting digestion, basal metabolism and utilisation of energy, Calories.

Classification of Natural food - their requirements.

Special study of some of the important protective food cereals, pulses.
Dietetics

Calculation of requirements for balanced diet in different ages, sex, occupation and economic group.

Developments of nutritional methods.
Relation of food intake to health.
Optimum nutrition, malnutrition, under-nutrition
Deficiency diseases.
Effects of the various methods of cooking, different food stuffs - Losses in cooking. Properties of condiments (Sauce, Vinegar).

Fluid, soft and Convalescent diet - diet in diseases.
Artificial foods-Complementary and Supplement feeding.
Modification of cow's milk.
Diet in diseases such as diabetes, obesity, constipation, diarrhoea.

Storage methods for different types of foods.
Domestic and industrial methods of presentation of food.
Dehydration of foods. Hygiene in kitchen and storage cooked food.
Sterilisation of foods, Food poisoning bacteria.
Technique of diet surveys and importance. Use of food Values-Average composition of diets.
PRACTICAL WORK

1. Reaction of Sugar, Starches, Carbohydrates, Dextrins.
2. Tests for Proteins and Estimation of Protein in food.
3. Properties and detection of fat in food and estimation.
4. Acid value, Iodine value, Saponification value of fats and oils.
5. Test for preservatives, Colours and poisonous element in food.
6. Action of Enzymes and Yeast.
8. Examination of egg, egg powder and meat.
9. Study of milk and milk powder, butter.
10. Composition of bread, cereal foods, honey, gur, jams, baking powder.
11. To analyse normal and abnormal urine.
12. Microscopic examination of blood, starches, milk.
B.5 HOME SCIENCES FIRST DEGREE SCIENCE (Three Years) COURSES

B.Sc. Home Science (Three Years) Course is offered in a number of Universities like Bangalore, Bombay, Calcutta, Delhi, Kerala, Punjab and Udaipur. Three Years Honours Course in Home Science is also made available in certain Institutions like Institute of Home Economics and Lady Irwin College of Delhi University and Vihari Lal College of Home Science of Calcutta University. Honours Courses provide for specialization in any field from a number of areas of Home Science subjects. Delhi University offers four such groups. Although the duration of these courses is same, no two pass courses appear to be identical with each other either in content or in pattern. The number of papers to be taken also varies from University to University. Eleven papers in all have to be taken in Kerala University, 12 in Delhi, 14 in Bangalore, 16 in Punjab and 18 in Bombay for the Pass course. Delhi's Honours Course prescribes 15 papers: 5 to be covered during the first year, 6 during 2nd year and 4 during the final year. These Honours Papers are:

24. University of Delhi Faculty of Science B.Sc Honours Home Science Examination Courses of Reading.
I Year

I. English A and B
II. Applied Physics
III. Applied Chemistry.
IV. Foods and Nutrition.
V. Applied Home Economics and Home Management

II Year

Compulsory papers,

I. Applied Biology
II. Sociology and Psychology
   Sociology
   and
   Psychology
III. Any two of the following Groups:
   Group A. Foods and Nutrition
   I. Foods and Nutrition
   II. Community Nutrition
   Group B. Home Management
   I. Home Management
   II. Household Economics.
Group D. Child Development
   I. Child Development
   II. Family Relations

III Year

The students shall select for Specialization any one of the two Groups opted in the Second year.

Group A. Foods and Nutrition
   III. Foods and Nutrition II
   IV. Microbiology and physiology
   V. Biochemistry
   VI. Maternal and Child Nutrition

Group B. Home Management
   III. Home Management
   IV. Consumer Education
   V. Household Equipment
   VI. Applied Physics

Group C. Textile and Clothing
   III. Clothing II
   IV. Consumer Education
   V. Textile
   VI. Textile Chemistry
Group D. Child Development

III. The Family in India

IV. Culture and Society

V. Child Development II
   (Adolescence)

VI. Maternal and Child Nutrition

The curriculum prescribed for Three years Pass Course in B.Sc. (Home Science) by the University of Delhi and Bombay could be taken as samples of the nature and standard of content of the course. These represent the scope and expectations of the course as available in other Universities and Institutions as well, to a great extent. By and large English and Hindi are the two compulsory general papers in the case of most Universities and are taught only during the first year of the course. But in the case of Kerala, two papers in English are obligatory for the first year. However, in Panjab, English is taught in both the first and the second year while in Bangalore, besides English in both these years, Hindi or a Regional Language is also compulsory for the first two years. The Home Science course also incorporates the learning of fundamentals of other Pure Disciplines like Physics, Chemistry, Economics, Biology,
Hygiene and Physiology, Psychology, Sociology, etc.
either during the first or the second year of the course.
The third year, however, is specifically devoted to
pure Home Science subjects, elements of which are also
taught in the earlier years as well.

Delhi University prescribes for the first year
of the course, only qualifying subjects of Physics,
Chemistry, Biology, English and Hindi, coupled with a
part-paper in Hygiene. While during the second year the
household applied aspects Physics, Biology, English and
Hindi, coupled with a part-paper in Hygiene. While du­
ring the second year the household applied aspects
Physics, Biology, Chemistry are prescribed besides a
paper each on Elements of Economics and Physiology and a
part paper on Hygiene carried over from the first year.
There is only one Pure Home Science paper at this level
which comprises of Clothing. During the third year of
the course, the papers on Household applied aspects of
Chemistry, and on Foods, Biochemistry & Nutrition,
Textiles and Laundry Work, Home Management, and Child
Development are made compulsory. Similarly, examining
the curriculum of Bombay University one notices that
besides English and Hindi, subjects like Chemistry,
Psychology, Applied Physics, and Microbiology are taught
during the first year of the course; the second year is
devoted to 'Biochemistry, Nutrition & Food Technology', 'Textiles and Clothing', 'Child Development', Home Management, Hygiene and Family Health', 'Home Economics', and 'Sociology', while during the third or final year papers on 'Food & Nutrition Dietetics', 'Textiles and clothing' both carried over from the last year, 'Adolescent Development and Marriage', 'Family Relations', and 'Applied Art, Home Furnishing and Housing', are prescribed. Obviously, the course of Bombay University expects a higher standard of achievement than that of Delhi's.

As to other Universities, Panjab prescribes pure Home Science subjects like 'Clothing & Textile', 'Food, Nutrition & Bio-chemistry', 'Home Management & Art in Every Day Life', 'Rural Development', and 'Family Relations & Child Development' during the third or final year of the course while during the first two years it offers other disciplines like English, Physics, Chemistry (all these during both the years), Sociology, Physiology, and Hygiene during the first, and Biology, Psychology and Economics during the second. But in the case of Bangalore University, papers on Pure Home Science are taught during all the three years of the course: 'Home Management' and 'Textiles and Clothing' being
taught during the first year; 'Mother Craft & Child Development' and 'Food & Nutrition' during the second, and 'Food & Nutrition', 'Microbiology and Food Hygiene,' 'Child Development and Family Relations,' 'Home Management', 'Textiles and Clothing' and 'Extension Methods in Home Science Education' during the third year. Other subjects taught here are Household Chemistry, Social Science, English and a Regional language - all during both the first and second year coupled with Physiology during the first and Hygiene during the second year of the course. The curriculum prescribed by the University of Bangalore certainly has a few strong points: First, it is rightly Home Science oriented from the very first year of course. Secondly, it includes a special paper on Mother Craft which is not so directly stated in the case of other Universities offering 3 years B.Sc. Home Science Course. Nonetheless, if we may recall, the same paper is prescribed in Agra and Kanpur Universities for their Two year B.A. Course in Home Science. However, the curriculum of Kerala University is somewhat like that of Delhi, particularly in approach through not in content. Like Delhi, the first and a part of the second year in Kerala University are devoted to the teaching of qualifying subjects like English, Chemistry, Physics, Psychology, Economics, Physiology. Pure Home
Science courses like Food and Nutrition are initiated only during the second, while during the third emphasis is mainly on Home Science subjects like Home Management, Food & Nutrition, Clothing & Textiles, Child Development, and Extension Methods.

Outlines of curriculum for B.Sc. Home Science (3 years) Course as provided by certain Universities are presented below. Detailed Syllabi are appended in Annexures I and II.

**Delhi University**

**B.Sc. (Home Science)-Course Outline**

1st Year

<table>
<thead>
<tr>
<th>Paper</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper I</td>
<td>Physics</td>
</tr>
<tr>
<td>Paper II</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Paper III</td>
<td>Biology</td>
</tr>
<tr>
<td>Paper IV</td>
<td>English</td>
</tr>
</tbody>
</table>

Group 'A'

<table>
<thead>
<tr>
<th>Paper</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper I</td>
<td>Hygiene</td>
</tr>
<tr>
<td>Paper II</td>
<td>Household Physics</td>
</tr>
<tr>
<td>Paper III</td>
<td>Household Biology</td>
</tr>
</tbody>
</table>

25. University of Delhi Faculty of Science: B.Sc. Home Science Courses of Reading.
Paper IV Clothing
Paper V Elements of Economics
Paper VI Physiology
Paper VII Household (Part I) Chemistry (Organic)

III Year

Group 'B'

Paper VII Household (Part II) Chemistry (Applied)
Paper VIII Foods
Paper IX Biochemistry and Nutrition
Paper X Textiles and Laundry Work
Paper XI Home Management
Paper XII Child Development.

Bombay University Course Outline Scheme

Composition in English with text
Hindi with text
Chemistry

26 University of Bombay; Ordinances and Regulations for B.Sc (Home Science); Pamphlet No. 6
Applied Physics
Physiology
Elements of Microbiology
Fundamentals of Psychology.

IIInd Year

Bio-Chemistry, Nutrition and Food Technology.
Textiles and Clothing I.
Child Development.
Home Management.
Hygiene and Family Health.
Home Economics.
Sociology.

III Year

Food, Nutrition and Dietetics II.
Textiles and Clothing II.
Adolescent Development and Marriage.
Family Relationship.
Applied Arts, Home Furnishing and Housing.
Four year B. Sc. (Home Science) courses are available in M. S. University of Baroda, S. N. D. T. Women's University, Udaipur University, and a few Agricultural Universities like Panjab Agricultural University (Ludhiana) and G. B. Pant Agricultural University (Nainital). A distinguishing feature of these courses is that like 3 years B. Sc. Home Science Honours Course of Delhi, they provide for a specialization field during the final year of the course. We have already seen that at-least four areas of specialization viz. 'Food and Nutrition', 'Home Management', 'Textile and Clothing', and 'Child Development' are obtainable in the Honours Course of Delhi University. Likewise, the Four Year B. Sc. Home Science Courses of S. N. D. T. Women's University and M. S. University of Baroda prescribe an elective area of specialization from amongst 'Child Development and Family Relations', 'Textiles and Clothing', 'Foods and Nutrition', 'General Home Science', and 'Home Science Education & Extension' in the case of S. N. D. T., and 'Child Development', 'Clothing & Textiles', 'Home Management', 'Foods and Nutrition', 'Home Science Education and Extension' in the case of M. S. University. This may obviously lead one to believe that the fundamental major aspects of any Home Science Course are the ones commonly offered
by all these institutions. These are primarily the sub-
jects of specialization offered by Delhi University. 
Three years B.Sc. Hon's Course in Home Science. Almost the same pattern of specializa-
tion subjects in Home Science is visible in the case of other Universities as well, which provide for a four year B.Sc. Home Science Course. They offer four or five areas of spe-
cialization.

Outline Syllabi of a few Universities are presented here

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lanq.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Lanq.</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>Gen.Sc.</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Ed.Ex.</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>CT(Clothing &amp; Textiles)</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Gen.Sc.</td>
<td>3</td>
</tr>
<tr>
<td>Gen.Sc.</td>
<td>1</td>
</tr>
<tr>
<td>Lanq.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Lanq.</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>Gen.Sc.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Gen.Sc.</td>
<td>3</td>
</tr>
<tr>
<td>Gen.Sc.</td>
<td>1</td>
</tr>
<tr>
<td>Ed.Ex.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>18</td>
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</table>

379
<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lanq.</td>
<td>Lanq.</td>
</tr>
<tr>
<td>2 Cr.</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>C.D. (Child Dev.)</td>
<td>C.D.</td>
</tr>
<tr>
<td>3 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Ed. Ex.</td>
<td>C.T.</td>
</tr>
<tr>
<td>2 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>F.N. (Food &amp; Nutrition)</td>
<td>F.N.</td>
</tr>
<tr>
<td>3 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Gen. Sc.</td>
<td>H.M.</td>
</tr>
<tr>
<td>2 Cr.</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>3 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Soc. Sc.</td>
<td></td>
</tr>
<tr>
<td>3 Cr.</td>
<td></td>
</tr>
<tr>
<td>18 Cr.</td>
<td>18 Cr.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lanq.</td>
<td>Lanq.</td>
</tr>
<tr>
<td>2 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>C.D.</td>
<td>C.D.</td>
</tr>
<tr>
<td>3 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>C.T.</td>
<td>C.T.</td>
</tr>
<tr>
<td>3 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>3 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>F.N.</td>
<td>F.N.</td>
</tr>
<tr>
<td>3 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Gen. Sc.</td>
<td>H.M.</td>
</tr>
<tr>
<td>2 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>2 Cr.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>18 Cr.</td>
<td>18 Cr.</td>
</tr>
</tbody>
</table>

Courses of the Fourth Year

Child Development:

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marriage</td>
<td>3 (Elective)</td>
</tr>
<tr>
<td>Nursery School Education</td>
<td>3</td>
</tr>
<tr>
<td>Kindergarten Education</td>
<td>2</td>
</tr>
<tr>
<td>Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Child and Family Welfare</td>
<td>3 (Elective)</td>
</tr>
<tr>
<td>Pre-school Education</td>
<td>2 (Elective)</td>
</tr>
<tr>
<td>Method and Material</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>15 Credits of</td>
</tr>
<tr>
<td></td>
<td>3 other dept. courses,</td>
</tr>
</tbody>
</table>

Eighth Semester

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N.S. Participation</td>
<td>4</td>
</tr>
<tr>
<td>Field work practice</td>
<td>4</td>
</tr>
<tr>
<td>Parent and Community Education</td>
<td>3 (Elective)</td>
</tr>
<tr>
<td>Family Relations</td>
<td>3 (Elective)</td>
</tr>
<tr>
<td>Seminar</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>13 Credits</td>
</tr>
<tr>
<td></td>
<td>6 Credits of other dept. courses,</td>
</tr>
</tbody>
</table>

Clothing and Textiles

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Textile</td>
<td>3 (Elective)</td>
</tr>
</tbody>
</table>
Advanced Clothing Construction 3 (Elective)
Indian Embroidery 3
Woven Textiles 2
Child Development 3
Education Extension 3
Food Nutrition 3

Eighth Semester

Printing of Textiles 2
Or
Dyeing of Textiles 2

Draping and Costumes Designs 3 (Elective)
Sociological and Psychological aspects of clothing 3 (Elective)
Seminar 3
Historic Costumes 3 (Elective)
Relating and Merchandising of Textiles 3 (Elective)
House Management 3

Home Management:

Seventh Semester

Home Management House 3 (Elective)
Scale Drawing 2
Time and Energy Mgt. 3
Equipment 4
Consumer Economics 3
Seminar 2
Elective courses from other Departments 6

Total for Majors 20 Cr.

Eighth Semester Credits

Home Management House 3
(Elective & Major)
Housing 4
F Furnishing 4
Mgt. Problem 2
Seminar 1
Elective courses from other Departments 6
Total for Majors 20 Cr.

Foods and Nutrition:

Seventh Semester

Applied Nutrition 3 (Elective)
Infant Nutrition 3 (Elective)
Biochemistry 3
Organic Chemistry 2
Physiology 3
<table>
<thead>
<tr>
<th>Elective Courses from other Departments</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD (Child Development)</td>
<td>3</td>
</tr>
<tr>
<td>Education Extension</td>
<td>3</td>
</tr>
</tbody>
</table>

### Eighth Semester

- Biochemistry: 3
- Microbiology: 3
- Diet Therapy: 3
- Nutrition: 3
- Food Science: 2
- Home Management: 3
- Clothing & Textiles: 3

### Home Science Education & Extension Education

#### Seventh Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstration, Laboratory &amp; Discussion</td>
<td>3 (Elective)</td>
</tr>
<tr>
<td>Selection &amp; use of Audio Visual Aids</td>
<td>4</td>
</tr>
<tr>
<td>Extension Education</td>
<td>2 (Elective)</td>
</tr>
<tr>
<td>Development of Education</td>
<td>3 (Elective)</td>
</tr>
<tr>
<td>Testing and Grading</td>
<td>2 (Elective)</td>
</tr>
</tbody>
</table>

#### Eighth Semester

- Organization of Education Progammes: 2 (Elective)
- Adult Education: 4
Evaluation and Curriculum 3
Seminar 2
Methods of Teaching in Home Science 2
Special Projects 1 (Elective)
Demonstration, Laboratory and Discussion 3 (Elective)

H.M. & F.N. 3 plus 3
C.C. & C.T. 3 plus 3

Syllabus for B.Sc. Home Science

First Year Home Science

1. English
3. Biology
4. Housing Nursing and First Aid
5. Child Development
6. Physiology
7. Microbiology
8. Chemistry
9. Elementary Food Science
10. Textiles & Laundry.

Second Year Home Science

1. English
2. Psychology

3. Physics
4. Chemistry
5. Child Development (3 to 6)
6. (a) Management in Daily Living
   (b) Related Arts.
7. Household Textile & Clothing
8. Food Preservation

Junior B.Sc. Home Science

1. English
2. Nutrition & Dietetics
3. Elementary Economics
4. Middle Childhood, Adolescence & Personality Adjustment
5. Children's clothing and Family Planning
6. Sociology
7. Housing & Furnishing
8. Elementary Family Economics
9. Educational Psychology.

Senior B.Sc.

Compulsory Subjects

1. English
2. Marriage and Family Relations
3. Home Management-Resident Course
4. Advanced Textiles
ELECTIVE ANY ONE:

Major I Child Development & Family Relations

1. Philosophy, Scope and Methods of Nursery and K.G. Education.
2. Family Development
3. Supervised Teaching in the Nursery School, or Kindergarten/or Children's Hospital, Orphanage etc. (No Exam)

Major II Textiles & Clothing

1. Applied Textile Design P.I (Dyeing & Printing)
2. Applied Textile Design P.II (Fabric Manufacture)
3. Indian Textiles and Indian Embroidery
4. Textile Testing
5. Clothing
6. Seminar

Major III. Foods & Nutrition

1. Advanced Biochemistry
2. Community Nutrition
3. Diet Therapy
4. Seminar
Major IV. Home Management

1. Advanced Housing & Furnishing
2. Management of Time and Energy
3. Consumer Education
4. Household Equipment
5. Seminar

Major V. General Home Science

1. Consumer Education
2. Applied Textile Design I
3. Family Development
4. Community Nutrition
5. Methods of Teaching Home Science

Major VI. Home Science Education & Extension

1. Adult Education and Extension
2. Methods of Teaching and Extension
3. Rural and Urban Society
4. School and Community
5. Seminar

B.7-8 HOME SCIENCE: MASTER OF ARTS/SCIENCE DEGREE (2 Years):

Master's Degree level courses in Home Science are provided in a few Universities like Baroda, Delhi, Madras, Panjab Agricultural, Andhra Pradesh Agricultural, and Gujarat. Except Gujarat where Master of
A-arts Degree in Home Science is awarded, the other Universities mentioned above give Master of Science Degree in Home Science. While Gujarat offers a typical Master's Degree general course in Home Sciences, coupled with some practical work, with eight papers four each year, the courses available in other Universities make for specialization and advanced level courses in different groups of Home Science subjects.

The courses offered by Gujarat are 'Foods and Nutrition', 'Home Management', (both in 1st and 2nd year), 'Marriage and Family', 'Home Science and Education' in the first year, and two other papers in the second year of its M.A. Home Science course. The M.Sc courses offered by Baroda, Madras or Delhi may serve as samples of the content and nature of the specialization courses made available at this level. Generally speaking, the major areas of specialization in Home Science are found in 'Child Development', 'Clothing and Textile', 'Foods and Nutrition', 'Home Management' and 'Home Science Education and Extension'.

Courses for M.Sc

Child Development

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissertation</td>
<td>10</td>
</tr>
</tbody>
</table>

Courses | Credits
---|---
Statistics and Research Methods | 6
Physical Growth & Nutrition during Childhood | 3
Advanced Child Development | 3
Theory of Child Behaviour | 3
Exceptional Children | 3
Family in Society | 3
Advanced Adolescence | 3
Seminar | 4

(Four credits will be divided as follows)

Research methods in child development (1st Semester) | 1
Seminar on Infancy (2nd Semester) | 1
Seminar on Maturity and Old Age (3rd Semester) | 1
Seminar on Special Topics (4th Semester) | 1

38

Group I

History of Early Childhood Education | 3
Study of a Pre-school Child | 1
Organization, Administration and Supervision of the Nursery School | 4

38
GROUP II

Advanced Family Relationships 3
Study of an exceptional 1
Child of a family - Field work 4

8

Courses of M. Sc.
Clothing and Textiles Department
(56 Credits)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissertation</td>
<td>10</td>
</tr>
<tr>
<td>Statistics &amp; Research Methods</td>
<td>6</td>
</tr>
<tr>
<td>Animal Experiments</td>
<td>3</td>
</tr>
<tr>
<td>Food Science</td>
<td>6</td>
</tr>
<tr>
<td>Institution Management</td>
<td>8</td>
</tr>
<tr>
<td>Special Project</td>
<td>3</td>
</tr>
<tr>
<td>Seminar</td>
<td>4</td>
</tr>
<tr>
<td>Advanced Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>Nutrition Laboratory</td>
<td>3</td>
</tr>
</tbody>
</table>

Related Courses

Advanced Biochemistry 7

56
Courses for M.Sc.
(Credits 56)

Home Management Department

<table>
<thead>
<tr>
<th>Basic Science</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice of courses from the Physical</td>
<td>4</td>
</tr>
<tr>
<td>or Social Science</td>
<td></td>
</tr>
<tr>
<td>Department depending on student's needs</td>
<td>4</td>
</tr>
</tbody>
</table>

Home Management Course: 20

- Theory of Household Management                                             3
- Management Problems in Home                                                3
- Family Economics                                                           3
- Home Management House Supervision                                          4
- Seminar                                                                   4
- Consumer Economics                                                         3

May select any two from the following:

- Management of Human Resources                                              3
- Advanced Household Equipment                                                3
- House-maker as an art consumer                                               3
- Housing for Family Living                                                    3

Research:

- Statistics and Research Methods                                             6
- Dissertation                                                                10

56
Courses for M.Sc. Home Science
Education and Extension Education
(56 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissertation</td>
<td>10</td>
</tr>
<tr>
<td>Statistics and Research Methods</td>
<td>6</td>
</tr>
<tr>
<td>Field Experience in Extension Education</td>
<td>3</td>
</tr>
<tr>
<td>Extension Methods in Home Science</td>
<td>3</td>
</tr>
<tr>
<td>Rural Sociology</td>
<td>2</td>
</tr>
<tr>
<td>Theory and Principles of Guidance</td>
<td>2</td>
</tr>
<tr>
<td>Preparation and Organization of Audio-Visual Material</td>
<td>3</td>
</tr>
<tr>
<td>Economics for Rural Families</td>
<td>3</td>
</tr>
<tr>
<td>Directed Teaching</td>
<td>3</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>2</td>
</tr>
<tr>
<td>Community Health and Recreation</td>
<td>2</td>
</tr>
<tr>
<td>Evaluation in Home Science</td>
<td>3</td>
</tr>
<tr>
<td>Seminar</td>
<td>4</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>

Related courses                                           | 10      |

**Total**                                                  | **56**  |
HOME SCIENCE: Doctoral Degree (2 years):

Ph.D. courses in Home Science are available in M.S. University of Baroda, particularly in two areas namely 'Clothing and Textile' and 'Child Development'. These are awarded on the basis of credit courses for 27-33 credit hours for as detailed below:

THE DEGREE OF DOCTOR OF PHILOSOPHY

Regarding the Ph.D. courses (27-33 credit hours for course work). The following courses are offered for Ph.D., Clothing and Textiles:

- Colours applied to textiles (4 credits)
- Fishes applied to textiles (4 credits)
- Independent problem in Clothing and Textiles (4 credits)
- Clothing Patterns and their Development (3-6 credits)
- Recent Developments in Textiles (3 credits)
- Textile Trade and Economics (4 credits)
- Statistics as applied to Clothing and Textile Problems (2 credits)
- Textile & Technical Analysis (3 credits)

Thesis 27-33 credits
Evaluation of recent studies in
Clothing and Textiles 4 credits
Reading and Conference in Man-made Fibres 3 credits
Reading and Conference in Clothing 3.6 credits

The following courses are offered for Ph.D. Child Development Department:

Research Methods in Child Dev. 4 credits
Statistics (1st & 2nd Semester) 6 credits
Advanced Readings in Early Childhood Education 4 credits
Sociology in Child Development 4 credits
Reading in Human Development 4 credits
Advanced Family and Child Welfare 4 credits
Seminar in the Teaching of C.D. 3 credits

Besides, every student registered for the degree of Ph.D. shall be required to appear at a comprehensive preliminary examination to be held by the Board of Experts. This examination shall be held not earlier than one year and six months prior to the submission of the thesis.

(a) The comprehensive examination for Ph.D. in Child Development may include the following areas of proficiency:

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A (i) Human Development,
(ii) Childhood Education,
(iii) Family Relations and Marriage.

A general understanding of the entire field of Child Development and Family Relations will be required.

The comprehensive examination for Ph.D. in Foods and Nutrition may include the following areas of proficiency:

(1) Advanced Nutrition,
(2) Physiology,
(3) Advanced Bio-Chemistry,
(4) Animal Experimentation,
(5) Statistics and Research Methods,
(6) Basic Microbiology.

The comprehensive examination for Ph.D. in Clothing and Textiles may include the following areas of proficiency:

(1) Principles involving clothing design,
(2) Retailing, merchandising as related to Clothing and Textiles,
(3) Textiles, and
(4) Sociological and socio-psychological, cultural and anthropological concepts applicable to Textiles and Clothing.
Broadly speaking, in today's society, it is for the breadwinner, the potential breadwinner, that the Home Science Courses at various levels assume their responsibility and importance. Beginning with different types of academic and vocational degree/diploma courses catering to the needs of para-medical, para-industrial, para-agricultural, other technical, teaching personnel etc., special courses in Home Science are also specially designed to prepare specialised Home Scientists to meet the growing manpower needs in a variety of allied Professions and Vocations.

Faculty of Home Science, M.S.U. (Baroda) states that the aim of education in this Faculty is, among others, "to prepare for an employment as a nursery and a secondary school teacher, college lecturer, dietician and institution manager, research and laboratory technician, nutrition and public health officer, social service supervisor, extension administrator, instructor, business adviser, advertising and demonstrating agent and manager," or again "The Home Scientists in business may work in food, textiles, clothing, or equipment: in promotion, experimentation,

31. M.S. University Faculty of Home Science Prospectus, Baroda, p. 3.
writing, or combination of there." Likewise, Sarojini Abraham observes "the potential outlets for home science graduates are extension work—upto district level officers; teaching in schools and colleges; hotel and hostel management; laboratory and research technicians in nutrition, food services, food preservation and food packaging; sewing machine demonstrators." Besides the courses offered by different universities for the Degree Examination in Home Science discussed earlier, it may be worth-while to examine the nature of curriculum and courses in the Professional or world of work areas in Home Science. These could be the preparation of Home Science Teachers and other technicians or Home Scientists as the case may be.

C.1 HOME SCIENCE: TEACHER EDUCATION (PRE-PRIMARY)

A specimen of the course for the preparation of Home Science teachers for pre-primary stage is available in the Post-Graduate Diploma in Nursery School Education offered by the Faculty of Home Science of M.S. University of Baroda. The details of the course are as follows:

32. M.S. University Faculty of Home Science Prospectus, Baroda, p. 6.
34. M.S. University Faculty of Home Science: Prospectus, Baroda, p. 31-32.
POST-GRADUATE DIPLOMA IN NURSERY SCHOOL EDUCATION

Purpose: To train teachers and administrators for Pre-primary schools. The aim of this course is to give the students a thorough grounding in Nursery School methods, Psychology, Nutrition and the fundamentals of good health in order to give them a deeper insight into, and an understanding of the problems of pre-school education. The course aims to help those who intend to work in pre-primary schools, to get better skills in handling these children, and also in developing proper techniques of guidance. Methods in organization and the maintenance of such institutions is also included.

Courses of Studies:

The course will be for the duration of one year at the end of which successful candidates will be eligible for the Post-graduate Diploma in Nursery School Education.

A student will be required to complete a minimum of 36 Credits.

An overall 'C' grade will be required for passing.

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<table>
<thead>
<tr>
<th>1st Semester</th>
<th>2nd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth and Development of Pre-school Child</td>
<td>Parent &amp; Community Education</td>
</tr>
<tr>
<td>Methods &amp; Materials</td>
<td>3 Theory</td>
</tr>
<tr>
<td></td>
<td>1 Practical</td>
</tr>
<tr>
<td>Nursery School Education</td>
<td>History of Early Childhood Education</td>
</tr>
<tr>
<td></td>
<td>1 Practical</td>
</tr>
<tr>
<td>K.G. Education</td>
<td>Nursery School</td>
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<tr>
<td></td>
<td>Participation</td>
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<tr>
<td></td>
<td>Community Nursery School Placement</td>
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<tr>
<td>Child Psychology &amp; Guidance</td>
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<td>Child Health</td>
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<td>18</td>
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</table>

C.2 HOME SCIENCE: TEACHER EDUCATION (ELEMENTARY); (2 years)

Home Science forms an integral part of the professional preparation of Elementary School Teachers. Generally,

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elementary teacher training courses are of two years duration in the country, except in few States where it is only one year's course. But whatever be the duration of this course, it makes Home Science, in its various aspects an essential component of teacher preparation. Elementary Teacher Education Curriculum includes in a general way Papers on General Science, Hygiene & Physiology, Craft and allied Home Science activities. A National Survey on Elementary Teacher Education in India observes "Every student teacher is expected to offer one major craft-in almost all institutions. The number of minor crafts to be offered by a trainee differs from state to state and to some extent within some States. The students are free to choose one major craft and one or two minor crafts". Again, "Agriculture, spinning and weaving, wood-work, metal work, tailoring, poultry farming, glove making, map making, needle work and embroidery, garment making, book binding, paper work, Home Science, horticulture, card board work and clay modelling are some of the crafts. The minor crafts offered by the institutions are gardening, card board work, leather work, bee-keeping, cane and bamboo work, clay

36. Ibid. p.55.
modelling, kitchen gardening, home science, music, drawing, poultry farming, paper cutting, batik work, toy making, etc. Some of the institutions also possess Home Science or Domestic Science workshops to carry out Home Science activities included under the crafts programme for elementary school teachers.

Besides, Home Science is also included as a special teaching paper for elementary teachers in some of the States. As an illustration, Paper on the 'Teaching of Home Science' as prescribed by Mysore Deptt. of Public Instruction, specially for the preparation of women teachers for elementary schools in the State is, presented below to gauge the scope and expectations from these teachers. This curriculum covers content matter in different aspects of Home Science viz 'Health, Hygiene and Home Nursing', 'Home Management', 'Food and Nutrition', 'Textiles and Clothing', and 'Child-Care' - and is treated in terms of knowledge of content, tools, pedagogies, and practical work. Generally, the first year of the course is devoted to the content enrichment along with practical work and the second year is devoted to the pedagogy and practical teaching.

Besides, the curriculum for Elementary Teacher

Education developed by the NCERT in 1969 includes two compulsory papers namely 'Health Education and Community Education' and 'Content and Methodology of work Experience' which have direct bearing of different aspects of Home Science like hygiene-School, Social, Personal-, Nutrition, Food, Health, Physical Education, Community living and Population Education; and work experience related to health, food, clothing, recreation etc. respect­ively. Details Syllabus is presented below:

**ELEMENTARY TEACHERS TRAINING COURSE (2 years)**

Home Science Paper

I Theory

FIRST YEAR

I. Knowledge of materials.

A. Health, Hygiene and Home Nursing:

(a) i) Care of the body - The sense organs: Ear, Nose, Eyes, Mouth and Skin.

ii) Their daily cleanliness.

iii) How to treat: ear ache; sore eyes; care of the teeth, the throat.

(b) Rules of

1. Food: Good clean food, correct food habits, different ways of cooking food, the advantages and disadvantages of cooking food, raw vegetables and their use as food.
2. Cleanliness: Personal cleanliness; Internal cleanliness; regular bowel movement, the role of fluids in the cleaning of the body; purgatives.

External cleanliness: baths, oil baths, clean clothes, cleanliness of the home and surroundings, cleanliness of bed and beddings, creation, clean habits in children.

3. Exercise: its benefits to health: Rest: how rest is necessary for health.

(a) Common ailments: Treatment and prevention of fever, cold earache, tooth ache, constipation and stomach disorders.

(b) Contagious diseases and their treatment: Small Pox; Tuberculosis, Dysentery, Diabetes, Scabies, Typhoid, Cholera, Rabies.

(c) Diseases caused by animal parasites and house hold pests and disease carriers: Hook worm, round worm, lice, bugs.

(d) The fly the enemy of man: Disease carrier, prevention of pollution of food in the home and hotels, extermination of the fly.

(e) The first aid and its importance.

37 - Deptt. of Public Instruction (Mysore), Two years Course for SSLCs TCH, 8

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B. Home Management:

1. The House:
   a) Choice of site and locality.
   b) Amenities of the home: transportation facilities, lighting, and water supply.
   c) Planning of rooms and sizes of rooms. Cleaning the room: sweeping, swopping, dusting, arrangement of furniture, flower vase arrangements of flowers.
   d) Spring cleaning:
      1. Distribution of labour.
      2. Cleaning of pictures; removal of cobwebs.
      3. Cleaning and polishing of furniture.
      4. Rearrangement of rooms.

2. Duties of the Housewife:
   a) Planning the routine duties of the house.
   b) Distribution of labour among the members of the family.
   c) Planning the menu for the day's meal.

3. Cleanliness of the Home:
   1. Disposal of waste matter refuse and garbage.
   2. Removal of house refuse:
      i) The dust bin and its use.
      ii) The garbage can in the home and how to use it.
      iii) The manure pit for dry leaves etc.

4. Cleaning of glass, metal, brass, Aluminium, stainless steel, copper, silver, china.
C. Food and Nutrition

1. Classification of foods:
   1. Body Building.
   2. Energy yielding.

2. Carbohydrates, fats, proteins, their use, requirements of each of these in the upkeep of the human body, types of food in which these are deficiency diseases caused due to lack of these foods.

3. Vitamins: different types of vitamins, vitamins deficiencies, the foods rich in vitamins, how to cook foods rich in vitamins without losing the properties.

4. Calcium and its courses: the diseases resulting from calcium deficiency.

5. Salts and minerals in the diet, their uses.

6. Food for the growing child:
   i) Type of food to be given.
   ii) How to cook and serve so that it will be easily digested.
   iii) Food for sick child.

7. Food supplements and substitutes.

D. Textiles and Clothing:

1. Clothing: suitability to the climate, to the work, to the age of the wearer, clothing for daily use and special wear.


3. Methods of laundry
   Soaping, boiling, steaming, bleaching, washing, blueing and drying of the various fibres according to their needs.

4. Preparation of laundry.

5. Washing of cotton clothes.

E. Child Care:

1. Prenatal care, medical checkup, food, exercises and rest.

2. Preparation for the new born baby.

3. Baby's food, natural, artificial, milk substitutes and supplements; equipments used and their care for feeding.

4. Baby's clothing, sleep and play habits.

5. Bathing a baby.

6. Physical development of a baby between birth and one year.
SECOND YEAR

A. Health, Hygiene & Home Nursing.

1. Epidemics:
   (a) cause (b) prevention (c) remedy.

2. The sick room:
   1. Sanitation and arrangement.
   2. The sick nurse—her qualities and duties.
   3. Disinfection of the sick room patients' clothing and belongings.

3. Invalid diets:
   1. Invalid diets, the need to observe diet in illness, the part that diet plays in curing the diseases.
   2. Fluid diet, semi solid diet and soft diet.
   3. The different diet suitable to common fever and intestinal diseases.

4. Disinfection:
   1. Through disinfections:
      (a) Natural: sunshine and fresh air.
      (b) Chemical: carbolic acids, D.D.T. and line.
      (c) Herbal: Tulasi need plant, Eucalyptus.
2. Through Fumigation:

Sulphur, the correct process of fumigation, precautions to be taken in fumigation.

3. Through sterilization:

(a) Boiling
(b) Steaming

5. First Aid:

(a) Treatment of burns, boils, stings, cuts, bruises, sprains and shocks.
(b) Treatment of fractures.
   1. Simple.
   2. Compound.
(c) Poisoning.

8. Home Management

1. Decoration of the house:
   (a) Use of curtains for privacy.
   (b) Colour scheme introduced in the home.
   (c) Flower arrangement, improvised vases made out of old Dalda, tins, bottles, gourd, pottery painted.
   (d) Rangoli: slight of hand encouraged in drawing and designing; use of flowers and leaves in Rangoli.
2. Hostess:

   1. How to entertain guests.
   2. How to plan a party.
   3. How to prepare the home for a public function.
   4. To draw up a forecast of expenditure.
   5. The characteristics of a hostess.

3. Time and labour saving devices.

   Their duties, planning their schedule of work, supervision and guidance.

5. Management of money:

   (a) Drawing up the budget in keeping with the income.
   (b) Keeping daily accounts.
   (c) The various sources of saving and how to operate them.
   (d) Supplementing the income of the home.
   (e) Necessities and luxuries.
   (f) Marketing: Planning, choice of articles, using discretion while purchasing goods.

C. Food and Nutrition:

1. Study of foods in the locality.
2. How to make up food deficiency.

4. The plan and arrangement of a store-room and kitchen, and their maintenance.

5. Different types of stoves and ovens.

6. Weights and measures in cooking with emphasis on accuracy.

7. Preservation of food.

8. Drawing up a menu for:
   (a) Poor family with income of Rs. 80/- p.m.
   (b) A middle class family with income Rs. 150/- p.m.

D. Textiles and clothing:

1. Removal of the following stains:
   Tea, Coffee, paint, blood, ink, grease and fruit-juice.

2. Treatment of fast and non-fast coloured cotton.

3. Storage of clothing, precautions for warm clothing storage.

4. Washing of silk and woolen garments.

5. Ironing of garments: different temperatures for different garments according to the fibre.
E. **Child Care**

Study of the older child from 1 year to 6 years.

1. Physical needs of the growing child in respect of
   (a) food and (b) clothing.

2. Psychological needs of the growing child:
   (a) Love and affection (b) Companions and friends.

3. The development of good habits:
   (1) Eating habits (2) Play habits (3) Toilet training
   (4) Sleeping habits.

4. How to prevent and correct:
   (1) Thumbsucking (2) Temper tantrums (3) Bad language.

5. (1) Development in general manipulation of large
   and small muscular skills.
   (2) Language development.

II **Knowledge of tools**

I YEAR

A. Health, Hygiene and Home Nursing:

1. Knowledge of First aid box.

2. Use of thermometer.

3. Use of fly paper.

B. **Home Management**

2. Method of maintaining them.
3. Proper use of equipments and cleaning agents while cleaning.

C. Food and Nutrition

1. Nature of equipments.
2. Different types of stoves.
3. Correct use of utensils while serving to make food attractive.

D. Textiles and clothing

1. Correct use of washing equipments and their maintenance.
2. Proper method of using needles while sewing and knitting.
3. Proper use of sewing machine.

E. Child care:

1. Feeding equipments and their proper care.

II YEAR

A. Health, Hygiene and Home Nursing:

2. Proper use of hot water-bag and ice bag.
3. Bandages and splints; their correct use.
5. Use of ounce glass.

B. Home Management:
1. Different types of vases for flower arrangements.
2. Proper using of time and labour saving devices.

C. Food and Nutrition:
1. Proper used of measurements while cooking for the family.
2. Home made Refrigerator made of earthen pots.

D. Textiles and Clothing:
1. Proper method of using chemicals and solvents while stain removing.
2. Proper knowledge of using iron box for different fabrics, according to the kind of fibre.

E. Child care:
1. Play materials and their upkeep.

III. Pedagogies:
(a) 1. Role of crafts in a scheme of general Education.
2. Place of Home Science in school curriculum.
6. Teacher’s role in the Home Science practical class.

7. Evaluation of pupils work.

(b) Technical Drawing:
1. Making Temperature chart.
2. Planning a house for building.
3. Simple designing and colouring for home decoration and flower vases.
4. Budget making.

(c) Preparation of Teaching Aids:
1. Illustrative Material:
   1. Black board sketches.
   2. Pictures.
   3. Preparing charts.
   5. Posters.

2. Other Teaching Aids:
   a) Library, Bulletins, Magazines, Pamphlets
   b) Visual aids: Slides, film strips, microscopes.
   c) School lunch and field Trips.
   d) Experts in the community like doctors, dietitians and nurses.
Teaching Practice:

1. Teaching a sufficient number of theoretical and practical types of lessons.

IV. Practical:

I YEAR

A. Health, Hygiene and Home Nursing

1. Visits to Hospitals.
2. Disinfection of drinking water wells and tanks
3. The care of compost and manure pits.
4. Making the patients bed.
5. Anti fly campaign.
6. Attendance on the sick in the locality.

B. Home Management

1. Daily cleaning, weekly and seasonal (Spring) cleaning of the home and the school.
2. Polishing furniture.
3. Preparing "Home made polishes".
4. Preparing manure pits.

C. Food and Nutrition:

1. Preparation of a breakfast - with the combination of the following:
   a) Idli and chutney.
   b) Idli and Sambar.
   c) Dosa and Chutney.
   d) Putto
   e) Poori palya or Poori sagu.
2. Preparation of lunch with combinations of the following:

<table>
<thead>
<tr>
<th>Rice</th>
<th>Side dish</th>
<th>Curry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice (Ordinary)</td>
<td>Vegetable palya</td>
<td>Sambar</td>
</tr>
<tr>
<td>Chitranna</td>
<td>Chips</td>
<td>Pepper water.</td>
</tr>
<tr>
<td>Bisibele Hulianna</td>
<td>Kosambhari</td>
<td>Vegetable koorma.</td>
</tr>
<tr>
<td>Coconut rice</td>
<td>Greens palya</td>
<td></td>
</tr>
<tr>
<td>Puliyoqare</td>
<td>Pachadi, Samu, Kootu, Chutney.</td>
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</tbody>
</table>


D. Textiles and clothing:

1. Identification of fibres:
   
   (1) Microscope test  
   (2) Burning test  
   (3) Tearing test  
   (4) Using chemicals.

2. To wash cotton clothes.

3. Needle work and tailoring:
   
   (1) Preparation of cushion cover using the basic stitches: taking, hemming, running & back stitches.
   
   (2) To embroider the same using the following decorative stitches: Stem stitch, cross stitch, lazy daisy stitch, stain stitch.
(3) To stitch a frock and princes petticoat using correct seams, hems, bias, neck band with buttons and button holes.

(4) To stitch an apron.

(5) To stitch an saree petticoat attaching 4 pieces.

(6) To crochet simple border lace for a saree petticoat.

(7) To knit a muffler, baby's booties and cap.

E. Child care:

1. Observation of a new born baby.

2. Bathing a baby.

II YEAR

A. Health, Hygiene and Home Nursing:

1. Disinfection of a sick room.

2. Use of the bandages: Triangular and Roller, Slings Broad arm sling, Narrow arm sling and St. John's slings.

3. Fomentation—wet and dry and how to administer them.

4. Sponge bath and correct use of bed pan.

5. Changing the bed sheet with the patient in bed.

6. Making a temperature chart.

7. Artificial respiration.

8. How to apply a tourniquet.
B. Home Management:

1. House cleaning.
2. Flower arrangement.
3. Rangoli.
4. Preparation of flower vases made out of old tins, pottery painted and wooden vases.
5. Planning a time table for daily work, carrying-out the same in action, keeping record for it and evaluation.
6. Preparing "Maegan chula"

C. Food and Nutrition:

1. Preparing evening tea out of the following:

<table>
<thead>
<tr>
<th>Savouries</th>
<th>Sweets</th>
<th>Beverages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omum pudi</td>
<td>Toffee</td>
<td>Tea</td>
</tr>
<tr>
<td>Kharasev</td>
<td>Coconut burfi</td>
<td>Coffee</td>
</tr>
<tr>
<td>Pakoda</td>
<td>Kesari Bhat</td>
<td>Cocoa</td>
</tr>
<tr>
<td>Bajji</td>
<td>Shankar poli</td>
<td>Ovaltine</td>
</tr>
<tr>
<td>Uppittu</td>
<td>Ladu</td>
<td>Kesari milk</td>
</tr>
<tr>
<td>Vadai</td>
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</tbody>
</table>

2. Preparation of dinners with the following combinations:

1. Rice (Plain), saru, vegetable palava, papadom, Chutney and pickle.
2. Chapathi with vegetable saagu or dhal.
3. Preparation of invalid diets:
   Albumin water, vegetable soup, Egg flip, fruit-juice, Canji, scrambled egg, custards, double boiled rice.

D. Textiles and Clothing

1. Removal of stains: Tea, coffee, grease, ink, paint, blood.
2. Laundering silk garments.
3. Laundering woolen garments: (1) knitted (2) woven.
4. Needle work and Tailoring:
   1) Cutting out and stitching a child's jumper.
   2) A girls langa and blouse.
   3) Choli.
   4) A child's jubba.
   5) Knitting a child's vest.
   6) Crochet: Bodies tops, pillow case, corners, broad lace.
   7) Patching, mending and darning of garments.

F. Child Care

1. Preparing food for a toddler and a preschool child.
2. Observation of shishuvihar
   1) Play equipments which held physical, social, creative and intellectual development.
   2) Observation of children:
      1. Their relation with teachers.
      2. Their relation with other friends.
Professional preparation of secondary school teachers in Home Science is done in more than one ways. Besides the courses offered by exclusively Home Science colleges like Lady Irwin College (Delhi) or SNDT Women's University College of Home Science (Bombay & Poona), a large number of traditional colleges of Education in the country offer, among other subjects, the teaching of Home Science, particularly for women teachers. These courses are generally called special Methods Paper in the Teaching of Home Science and are, more often than not, both content as well as methods-oriented courses. This is generally the most common approach followed in most of the Teachers' College in the respect of method subjects, including Home Science. Under this pattern every teacher is expected to be trained at least in two school teaching subjects, out of which one could be Home Science, depending upon the choice made by individual students. Another alternative, which is available only in a few cases, that is in certain colleges of Education under the Universities of Agra, Gorakhpur, Jodhpur, Udaipur etc., is to provide for Advanced level course in the Teaching of Home Science. Here only one subject for school teaching has to be offered. This is generally treated as equivalent to
two ordinary level school Method Subjects and the student specializes thereby in the teaching of only one subject. Elements of Home Science are offered in yet another way, that is, in the form of Practical work under community life or craft activities. A sample each of the curriculum for the three sets or types of courses in the Teaching of Home Science would go a long way in explaining the nature and standard of content, methodology etc. involved in the preparation of Home Science Teachers.

Therefore, the ordinary level B.Ed. Methods of Teaching Home/Domestic Science Course of Agra University, advanced or specialization level B.Ed. course in Home/Domestic Science of Udaipur University, and B.Ed. Practical Test in craft and Evaluation of work under community life as obtainable in Berhampur University are presented here as these are favourably comparable to respective courses prescribed in different Universities in India or to the one recommended by NCERT in its Secondary Teacher Education Curriculum (1975).
PART I

1. Application of Science to the Home life.
2. Place of Domestic Science in the School curriculum of girls.
3. Values of the following subjects:
   (a) Physiology and Hygiene,
   (b) Home Nursing, First Aid and Mother Craft,
   (c) Needle Work and Household Sewing,
   (d) Nutrition and Cooking,
   (e) Home Management,
   (f) Laundry.
4. Formulation of Aims and Objectives of teaching Domestic Science and their specifications in terms of learning outcomes.

PART II

7. Curriculum-Principles of Construction, Development of curriculum at different levels of school.
8. Correlation of Domestic Science with other School subjects.

9. Materials aids for teaching Domestic Science—Library books, Charts, Models, Film strips and other apparatus required for the teaching of the various branches of the subject.


11. Organization of Demonstration and Practical work.

12. Lesson Planning.


14. Evaluation in Domestic Science,
   (a) Preparation and Administration of Objective Test in Domestic Science,
   (b) Summarization and Interpretation of results.

15. Organization of different kinds of supplementary activities like assignments, excursions, visits to appropriate places, hobbies and other work related to Domestic Science.

16. Organization of Domestic Science Department.

17. Qualification of a Domestic Science Teacher.

38. Agra University, Syllabi and Courses.
Practical and Sessional Work

1. Each student teacher will be required to deliver fifty lessons in all, care should be taken that all the branches are taught to different classes of the secondary school. Each trainee shall be required to observe 25 lessons in Domestic Science and prepare critical notes in an observation book.

2. The following sessional work should be completed during the session, and this should be submitted for examination to examiners at the time of practical examination.
   (a) Preparation of Needle work, Laundry and Cookery record books.
   (b) Cutting and stitching of the garments included in the high school course.
   (c) Specimen of embroidered articles.
   (d) Preparation of two teaching aids.
   (e) Specimen of preserved food articles.
   (f) Construction and administration of fifty objective based items of achievement covering all the areas of Domestic Science.
   (g) Report of the experiment carried in the teaching of Domestic Science.
PART I — THEORETICAL

1. The meaning and scope of Home Science.
2. Aims and value of the subject.
3. A general idea of the meaning, scope and importance of the various subjects which are included in Home Science upto the Higher Secondary Stage.
5. The ideal syllabus of Home Science.
6. The equipment of the Home Science room and Library.
7. The place of practical work and demonstration.
8. A study of the material aids of Home Science; and their importance.
10. Relations between Home Science and other subjects.
11. Qualities of text books in Domestic Science at different stages.

PART II — SESSIONAL WORK

1. Student's offering Domestic Science as a special subject will be required to give 12 extra lessons in the various subjects mentioned in para 3 of the theoretical section.
2. (a) Maintenance and preparation of a family budget for a month, (ii) Recording of market prices of essential commodities (food, clothing, vegetables, etc.) for 2 months.
3. (i) A study of the present day curricula of Domestic Science at the various stages of education in at least 3 States in India and 2 western countries.

(ii) Preparation of the syllabus for any one of the stages, Middle, High, School or Intermediate.

(iii) Two essays to be written by each student bearing up Domestic Science.

4. Practical work: The students will select any 3 items out of 6 given below.

(i) House-Hold Arts:
   Any one of the following:
   (a) Colour scheme for a room.
   (b) Decoration of room on special occasions.
   (c) Permanent decorations—using coloured paper and cloth for flowers, paintings, etc.

(ii) Embroidering, Tailoring & Knitting:
   (a) Making of such simple things of everyday use (at least 3 pieces) as cushion cover, table cloth, bed cover, pillow cover, etc.
   (b) Designing, cutting and sewing of 2 pieces of garments for children (for male and female children)
   (c) Knitting for one woolen piece using coloured wool.
   (d) One design of embroidery work.
(iii) Cooking:
(a) Preparation for full course of vegetarian or non-vegetarian lunch or dinner.
(b) Either 3 special vegetable dishes or 3 special non-vegetarian dishes incorporating fish, eggs and meat.
(c) At least 3 different types of sweets.
(d) Preparation of items for Nashta for 7 days of the week (Scheme not the actual nashta)
(e) Preparation of a diet for invalids.

(iv) Laundry:
(a) Cleaning with soap etc. of cotton, linen; woolen and silk cloth and ironing.
(b) Repairs of garments.
(c) Removal of stains on cotton, woolen and silken cloth.
(d) Storing of cloth, using insecticides.

(v) First aid and Home Management:
(a) Various types of bandaging, splints and slings.
(b) Keeping of daily temperature record for at least a week in one case of illness.

(vi) Physiology Hygiene & Mother Craft:
(a) Microscopic examination and reading of slides of blood, cell, milk, bacterial specimens.
(b) Visiting slum areas and recording of home conditions of one inmate of that locality.
(c) Visiting a child welfare centre of hospital where care of neo-nates is taken.

5. Construction and administration of one objective test of at least fifty items for any class at the Higher Secondary stage.

**Practical Tests in craft and Evaluation of work under community life**

A. Every candidate is required to take up any one of the following crafts:

1. Spinning and Weaving
2. Agriculture
3. Wood work
4. Tailoring
5. Fruit & Vegetable preservation

**Spinning and Weaving**

Theory and Practice:

a) Ability to prepare khadi and to wear khadi habitually.

b) Knowledge and Practice in picking cotton and its processing such as cleaning, ginning, processing, carding and silver making.

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40. Berhampur University, B.Ed. Syllabus.
c) Proficiency in spinning yarn of counts varying from 10 to 25 with ease and satisfactory speed.
d) Practice in twisting preparing 'Tekli' reeling simple designing and all the processes of weaving on handloom.
e) Ability to estimate the weight of yarn, count of yarn, strength of yarn and finished product of yarn.
f) Ability to estimate the price of 'than' prepared.
g) Ability to work out the profit and loss account of a single project.
h) Ability to maintain accounts, such as stock register, production register, disposal register, balance-sheet etc.

Agriculture

Theory and Practice:

a) Ability to appreciate the advantages of the improved agricultural methods, such as lime, swon crops, scientifically planned crops, mixture, better and improved seeds, seed testing before use.
b) Ability to select land for a crop for particular piece of land.
c) Ability to grow fruits and vegetables as a subsidiary occupation.
d) Ability to realise the significance of the compost drive and reclamation movement and practice in their execution.
(e) Ability to determine the crops to grow.

(f) Ability to determine the requirements of balanced diet for a single individual, his family, and for the college community.

(g) Ability and practice in the preparation of cropping scheme.

(h) Practice in the preparation of usual budget and profit and loss account of a farm.

(i) Knowledge and ability in storing grains and preparing them for the market.

(j) Ability to appreciate the importance of co-operative enterprises specially in Agriculture.

(k) Ability to maintain accounts such as stock books, production register, produce disposal register, profit and loss account.

(l) Ability to appreciate the dignity of labour.

(m) Ability to earn at least two annas per hour.

Wood Work

(a) Ability to recognise the different kinds of wood for preparation of articles and furnitures.

(b) Ability to distinguish between seasoned and unseasoned wood.

(c) Ability to organize a workshop of carpentry and ability to work out profits and loss of the enterprise.
(d) Knowledge and practice in the use of different kinds of tools used in wood work.

(e) Ability to prepare common articles for use at home and school and college, such as sandals, rollers, Dasti Scales, Chaklabaina wooden pens, wooden sheets, simple boxes, pens, hangers, atoran, paret Hathapatle etc.

Tailoring

There will be no separate theoretical Instruction. Such theory as is needed for practical work may be given during practical work.

1. Study the various parts of the machine, how to oil and clean the parts.
2. Use of the different kinds of stitches such as hem, back stitch, french seam, buttonhole stitch.
3. Cutting and finishing on machine the following garments: Jumpers, kamis, janghiyas, banyans, kurtas, shirts, half pants, blouses, frocks.
4. Practical knowledge of all the different stitches; such as hem, back stitch, french seam, buttonholes.
5. Mending of clothes—Such as round holes, rectangular holes, torn slits.
6. How to measure for the various garments and calculate the quantity of materials of different width.
Fruit & Vegetable Preservation

THEORETICAL

1. The urgent need for Fruit Preservation Industry — Its relationship with Horticulture development, developing and modernising. Fruit Preservation as a home-scale industry and as an educative craft.

Causes of wastage and spoilage and their remedy.

2. Raw materials for Fruit & Vegetable preservation kinds, varieties and types of useful raw materials, geographical and seasonal distribution; quantity produced, utilised and unutilised; quality in terms of food value, medicinal value, suitability for processing and preservation and possible industrial applications.

3. Principles and methods of preservation:
   (a) Various types of tin and glass containers and packing materials.
   (b) General principles of preservation selecting, gardening, washing, bunching, peeling and pitting of fruits and vegetables—Pasteurization and sterilization.
   (c) Methods of preservation—heating, drying, salting, freezing, use of oil and vinegars, use of sugar, use of chemicals and fermentation and by the production of vinegar.
   (d) Effect of processing on the food value of preserved fruits and vegetables.
PRACTICAL

1. Acquaintance, with learning and the operation of various equipments, improvising, cheap equipments for purpose of processing.

2. Selecting, grading, washing, peeling and pitting of fruits for processing and preservation.

3. Preparation of sugar syrups and brines-testing syrups strength.

4. Bottling of fruits—Preparation and preservation of fruit juices, squashes, condials and syrups of locally available fruits.

5. Canning—Canning of fruits in syrups, vegetable in brine and curried vegetables.

6. Preparation of jams, jellies, marmalades and candidates.

7. Preparation of oil and vinegar pickles, chutneys, ketchups and sauses.

8. Preparation of fruit vinegars.

9. Drying and dehydration—Sun-drying and dehydration by the home-made drier.

B. Organisation of the Community Life of the Training Centre as a Democratic Society based on Co-operative work—
(a) Organisational of General Assembly—Election of Ministers for different departments of community life such as food, finance, health and sanitation, cultural activities etc.—Cabinet of Ministers—Duration, duties and responsibilities.

(b) Maintenance of discipline in the community—Self imposed discipline vs. discipline imposed from outside.

II Activities—

(a) Organisation and management of the community kitchen.
(b) Individual and community cleanliness including physical training, games, sports etc.
(c) Recreational and cultural activities—celebration of festivals and observance, literary meeting, dramatic performances, musical evenings, excursions, debates and discussions.
(d) Community prayer.
(e) Reading of newspapers, debates, groups discussions in order to study and understand current problems.

III Social Trainings—

Organizing programme of community cleanliness and health drives. Rendering help to the people in times of difficulty.
Village Surveys:

A study of the village houses and village community - with a view to understand the social, economic and cultural background of the child under the following heads :-

(a) Sanitation and Health
(b) Economic condition.
(c) Social and Cultural background.

The community work in all its aspects as enumerated will be continued throughout the training period and the pupil teachers will be required to finalise and submit a report to the Principal to his full satisfaction.
The new school curriculum seeks to give a sort of redirection for the development of a need-based Teacher Education Programme for different levels of schooling. The new approach to Teacher Education suggests 'three major theoretical and practical areas, viz: (A) Pedagogical Theory, (B) Working with community, and (C) Content-cum-Methodology of teaching School subjects and practice teaching and has also suggested course guidelines for different levels of Teacher Education, from Pre-Primary to Post-graduate.

In the new suggested outline, the place of Home Science in Teacher Education would be of much greater consequence than hitherto. At the Pre-Primary stage, the contents of Home Science are available in all the three areas of the suggested curriculum which are 'Child Development', 'Child Care', 'Work situations', 'Work Experience and Related Practical Work'. Similar is the case with Primary and Secondary Teacher Education curriculum where Health, Physical Education and Recreation Activities as also Environmental studies would, in addition, involve Home Science aspects. Home Science would

also retain its position among the Methods of Teaching Paper, particularly at secondary level. However the 42 and Collegiate stages of Teacher Education are likely to open new vistas for Home Science teaching, as it has to build its place both in the academic as well as the vocational and professional streams of education at these levels. The suggested post-graduate Teacher Education Programme in the form of M.Ed and M.Phil. is equally applicable to Home Science Teachers as to others.

C.5 HOME SCIENCE: DIPLOMA CERTIFICATE COURSES (VOCATIONAL)

Explosion of knowledge and Education among women fold during the last few years or so has awakened them to make their due contribution to the fast developing modern world. More and more women are now joining the world labour force in various fields of work. They are gaining experience and specialization in a number of areas to get suitable jobs for themselves. As a result, very many women's Polytechnics and similar other institutions are now coming up to train them up for respective jobs. Enrolment of women to all sorts of educational and vocational courses is going up day by day. To
meet this urge for job, a host of certificate and diploma courses have been instituted in many areas, including that of Home Science. Most of the Women's Polytechnics opened in the country provide for courses like tailoring, interior decoration, beautician, designing, needlework, embroidery, etc., which are open to matriculants or higher secondary passed candidates. Lately, many of the degree colleges have come forward with short-term diploma or certificate courses in various vocational trades, which can be pursued by students alongside their college education in other subjects. Some of the universities and institutions run specially designed diploma courses in Home Science areas for graduates and post-graduates. For example, M.S.Univ of Baroda, Instt. of Home Economics under Delhi University, All India Institute of Hygiene and Public Health, Calcutta and Institute of Catering Technology and Applied Nutrition, Bombay organise a post-graduate diploma course in dietetics. The Institute last named runs in addition a number of other courses like Diploma courses in Hotel Management and Catering Technology (3 years), Post-Diploma course in specialised Hotel Management (one year), Certificate Course in Craftsmanship in Bakery and Confectionary (1 year) Craftsmanship in Canning and
Food Problem (1 year) and a few other courses of shorter duration of 21 weeks to 24 weeks. These include certificate course in Elementary Management, Craftsmanship in Cookery, House-keeping, Hotel Reception and Book Keeping, and Hotel Management and Counter Service. The orientation of all these courses is practical rather than mere academics of the profession.
It goes without saying that Home Science has still yet to hold a status equal to that of the traditional disciplines. It is still in the developmental stage and heavily draws upon the contents of the Physical and life sciences as well as Social Sciences. It offers a sort of an integration and inter-disciplinary approach, among various disciplines with a positive focus on creating a healthy home environment that may be conducive to right living and better citizenship. Home Science is not one subject; it comprises wide range of subjects, such as foods and nutrition, textiles and clothing, laundry work, child care and Development, First Aid, Care of the Sick, home nursing, general home management, and decoration; arts and aesthetics as applied to everyday living, family and social relations. Cookery, sewing, Mother craft, Dietetics, hygiene and physiology become important aspects of a Home Science Curriculum. Home Science curriculum offers a kind of graduated course at different levels of schooling. It is confined to elementary hygiene, gardening, cookery and needle work at primary and Sec. Stages. At Higher Secondary and College levels, the curriculum is deepened by a more intensive
study of these subjects, and is widened by the additions of the social and physical sciences. A study of the curriculum content at these levels may indicate that a great deal is lacking in order to arrive at the comprehensive goal of Home Science education, which is to improve the conditions of home life, to make homes the centres of cultural life. The obvious emphasis in Home Science curriculum to-day is on the perfection of skills rather than on its implications for personality development and human relationships. This may be achieved when Home Science is raised to the position of an accepted discipline - academic as well as professional. In the meanwhile, curriculum development in home science has to be viewed, not in isolation, but in relation to the changing trends in other disciplines and institutions. What is the basic nature and structure of Home Science as a discipline remains still to be examined.

An important point for consideration is an increasing degree of awareness of the place of home science in professional and vocational courses and curricula. Home Scientists and workers find, to-day, an important role of Home Science in activities like social welfare, education, agriculture, industry,
medicine and health care, nutrition, child development, rural reconstruction etc. This may give rise to an important question of relationship between Home Science curricula for the academic and the vocational streams. What makes an adequate theoretical background for pursuing higher education in Home Science and what type of practical orientation would be desirable for the professional preparation of Home Science technicians and practitioners? What would constitute Home Science Education for Employment and that for scholastic pursuit? The nature and standard of care curriculum and the extent of specialization in different areas of Home Science at different levels of schooling and of higher education - academic as well as professional or vocational - will determine the levels of achievement and expectations. How much of the Home Science content and practice would sufficiently meet the wide range of needs of pupils at various stages of their growth and development? The degree to which it can meet the educational, vocational, Social and personal needs of the pupils will go a long way in making the subject 'Home Science' popular as a discipline. Naturally, therefore, it is the 'SCIENCE' in Home Science which needs to be well emphasized in
any Home Science curriculum, which again in consequence will help it have a tangible carry over effect.

In this context, the school Home Science curriculum seeks to acquaint the students with the basic scientific principles and practices involved in (i) Tailoring various types of garments including proper study and maintenance of sewing machines and equipment; (ii) understanding basic domestic duties coupled with making home a pleasant and beautifical place in terms of the living standard, (iii) personal and social hygiene including understanding of the science of Air, Water, Food, Disease, Human Physiology, First Aid, Home Nursing, Household management including the understanding of basic principles of home construction decoration and neighbourhood, Cookery, Laundry etc. (iv) Embroidery and Needlework, Designing and Drawing. Most of it is aimed at under the Art and Craft, or in the newer text, under the work experience activities, though in a general way. However, Home Science as an optional subject under the existing curriculum seeks to offer all these for a more detailed and intensive study with particular emphasis on specific issues and problems, besides the general, involved under the first group. Yet Home Science as a special subject
provides a good deal of enrichment and depth for understanding and applying various principles in (i) Human Relationships and needs; (ii) Home and House furnishing including exterior and interior decoration, disposal of refuse in urban and rural conditions, (iii) clothing and Textiles in different perspectives (iv) Home Economics, budgeting, savings, manners and etiquettes; (v) Foods and Nutrition including cooking and preservation, labour saving devices and gadgets; (vi) Human Physiology, Health and Hygiene including understanding of water, Bacteria, Infection and Dis-infection etc. (vii) First Aid and Home Nursing and the like. Degree of achievement at these three levels of school curriculum in Home Science is obviously regulated and graduated in proportion to the levels of expectations in general, specific and special terms. This is rather the frame of grading of Home Science curriculum from general through specific to specialization in certain aspects of the course at school stage.

The new pattern of school education, none-theless, makes room for additional items like Horticulture including kitchen gardening, ornamental gardening and pot culture, Bakery and confectionery, Dyeing, Repair of
Household gadgets, general nursing etc. under the general Work Experience activities. Another strong point of the new curriculum is the compulsory paper on 'Health Education' which has much to offer for Home Science Students. It includes, among others, 'health' in various dimensions viz. physical, Mental, Social and ecological; growth and development; Food and Nutrition; Communicable and Non-Communicable diseases; consumer education in terms of medicine, surgery and drugs; first aid and Home Nursing, etc. Nevertheless, it may not be out of place to remark that on its face value, the new school curriculum has, in a way, ignored to treat Home Science as a subject or discipline in itself.

The existing Pre-university course in Home Science is, more or less, of the standard of the special group curriculum on the subject at school level. Likewise, it includes the understanding of basic principles of Physiology and Hygiene, Child growth and Development, Household Management and Economics, Family and Community Relations etc. coupled with the knowledge of basic principles of the allied branches of science. However, a wide variation is visible in the Home Science curriculum available for the
First Degree Examination depending upon the duration and treatment of the subject as belonging to Art or Science. The two year Degree courses in Home Science under Arts Faculty include things like Household Art including fundamental principles of Art and for that matter Fine Art, in relation to Home Design and Decoration, Accommodation and Accessories arrangements; Nutrition, Bacteriology and Bio-chemical elements in foods; Handicraft and Kitchencraft; Household management, clothing and Textiles, and Household Economics; Mother Craft and Child Care; Maintenance of Household Gadgets and equipments; Laundry, Sewing and Needlework; Meal Planning and Preparation, Child Development and Family Relationships, Health and Hygiene etc. Obviously, these courses provide more for Home Science as an Art and consequently do not seek to draw much from the science curricula. Similarly, the Three years Home Science Degree in Arts is oriented towards treating Home Science as an integration of different Arts subjects like Economics, Sociology, History, Geography, Health and Hygiene, General and Technological development, Psychology and Education, Family life cycle and Human Relations, Art and Crafts, etc. Science elements in these curricula are rather indirectly discernible in certain aspects
like Metabolic classification of foods, Human Physiology, Energy metabolism, Chemical Preservations, Bacteriology, Infection, etc.

On the other hand, the first degree Home Science course available under the Science Faculty, irrespective of the provision whether it is of three years duration or that of four or whether it is a Pass or an Honours course, tries to give this subject a positive scientific bias in content and approach, though it also draws freely from Art and Social Science subjects as well. However, the Two years B.Sc (Home Science) course remains comparatively at the level of two/three years B.A. degree course in Home Science. The two general papers of the Two years B.Sc (Home Science) course include, among others, topics like Hygiene, Bacteriology and preventive Medicine including Hygiene - Personal and General Public, Domestic and school, - common infective diseases, Maternity and Infant Welfare Work, Parasitology, Nutrition and Dietetics. The three Home Science Papers included at this level are similar to general level course at B.A. two years course, which lean more towards Home Science as an Art subject rather than as Science.

The Three/Four years B.Sc. (Home Science)

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courses make the theoretical as well as applied aspects of different Science Subjects as the very basis of the Home Science Curriculum. Physics, Chemistry, Physiology, Anatomy, Biology and Zoology in the form of pure disciplines are usually taught at the initial stages of the course, followed by the knowledge and application of their applied aspects to Home Science. The different areas of Home Science are gradually incorporated in the middle and final stages of the course and are taught in reference to their particular relation with these sciences. The content of the pure Home Science elements in these courses pertains to areas like Food and Nutrition, Home Management and Home Economics, Clothing and Textiles, Child Development, Family and Social Relations, Mother Craft, Consumer Education, Household Equipment, Laundry, Housing, Cookery, Dietetics, Home Decoration etc. Among the Social Sciences taught in Home Science at this level are subjects like Psychology and Sociology.

Home Science courses at Post-graduate level also fall in two categories viz. organized by the Faculty of Arts and that of Science. However, the duration of these courses is two years in both the cases. The obvious dichotomy of treating Home Science both as Art and Science subject even in content and methodology has been
maintained at post-graduate level curriculum in the subject. The former offers an ordinary level course while the latter, in addition, makes provision for specialization areas in different aspects of Home Science, such as Child Development, Clothing and Textiles, Foods and Nutrition, Home Management, etc. Similar provision for specialization is also available at B.Sc. level curriculum of three and four years duration.

Doctoral Level provision of Home Science credit courses is available in areas like clothing and Textiles, Child Development, Food and Nutrition etc.

In so far as job orientation in Home Science is concerned, a variety of courses and curricula are available both at vocational as well as Professional levels. These are, inter-alia, in the preparation of Home Science teachers for pre-primary, primary, secondary and post-secondary levels of schooling. The kind of subjects offered for pre-primary teacher training include Growth and Development of pre-school Child, Parents and Community Education, Methods and Materials and Educational theories. Preparation of Elementary School Teachers in Home Science includes, among others, things like Health, Hygiene and Home Nursing, Home Management, Foods and Nutrition, Textiles and Clothing, Child Care, First Aid, etc. coupled with knowledge and application of tools, appliances, and Methods used in the teaching of these areas, preparation of Teaching
aids, practical work in all these sections, and Teaching of theoretical and practical lessons of various type and involving various Methods and techniques. Similarly, the training of Secondary School teachers deals with Physiology and Hygiene, Home Nursing, First Aid and Mother Craft, Needle work and Household Sewing, Nutrition and Cooking, Home Management, Laundry, Household Art, Child Development and Care, Fruit and Vegetable preservation, Woodwork, Agriculture, Spinning and Weaving, Gardening, Social Training, School and Community Health etc. Teacher preparation curriculum in Home Science at different levels is content-cum-pedagogy oriented envisaging an effort to relate Home Science with school and community environment in as many ways as possible.

Then the curriculum for certificate and Diploma level courses in different aspects of Home Science seeks to prepare Technicians in different Home Crafts. These courses are specially designed for individual trades like Tailoring, Interior Decoration, Beautician, Dietitian, Bakery and Confectionary, Cookery, House Keeping etc. Post-graduate Diploma Course are also made available in subjects like Dietetics.
The obvious variations, which are more of the nature of chance variations in the nature and scope of Home Science Curriculum at different levels and stages in different parts of the country, may lead one to believe that a lot needs to be done in order to make this subject as a discipline in itself. The desirability of working out a sort of tangible core curriculum for different streams from school through higher education, besides intensive elective and specialization curricula in various aspects of Home Science. An effort is made in the next chapter to devise such kind of a Model Curriculum in Home Science.