

## **B.A./B. Sc. (HONS.) HOME SCIENCE**

### **DISTRIBUTION OF DIFFERENT COURSES AND CREDITS IN VARIOUS SEMESTERS**

**Offered By:**

Department of Home Science  
Faculty of Science  
Banaras Hindu University



**BANARAS HINDU UNIVERSITY**

**Semester-wise Distribution of Courses and Credits**

<b>Semester - I</b>		
<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
HSB101	(A) Introduction to Foods ( <i>Credit – 2</i> ), and (B) Human Development ( <i>Credit – 2</i> )	4
HSB102	<i>Practicals based on course HSB101</i>	2
<b>Total</b>		<b>6</b>
<b>Semester - II</b>		
HSB201	(A) Introduction to Clothing Textiles, ( <i>Credit – 2</i> ) and (B) Family Resource Management ( <i>Credit – 2</i> )	4
HSB202	<i>Practicals based on course HSB201</i>	2
<b>Total</b>		<b>6</b>
<b>Semester - III</b>		
HSB301	(A) Home Science Extension Education, ( <i>Credit – 2</i> ) and (B) Human Nutrition ( <i>Credit – 2</i> )	4
HSB302	<i>Practicals based on course HSB301</i>	2
<b>Total</b>		<b>6</b>
<b>Semester - IV</b>		
HSB401	(A) Interior Design, ( <i>Credit – 2</i> ) and (B) Clothing Construction ( <i>Credit – 2</i> )	4
HSB402	<i>Practicals based on course HSB401</i>	2
<b>Total</b>		<b>6</b>
<b>Semester - V</b>		
HSB501	Home Science Extension Education and Rural Development	3
HSB502	Consumer Economics	3
HSB503	Fundamental of Human Development	3
HSB504	Diet Therapy I	3
HSB505	Fashion Designing	3
HSB506	<i>Practicals based on course HSB501 &amp; HSB502</i>	3
<b>Total</b>		<b>18</b>
<b>Semester - VI</b>		
HSB601	Advanced Home Science Extension and Communication	3
HSB602	Diet Therapy II	3
HSB603	Advanced Human Development	3
HSB604	Consumer Products Safety and Legislation	3

HSB605	Statistics and Research Methods (Elective)	4
HSB606	<i>Practicals based on course HSB601</i>	2
HSB607	<i>Practicals based on course HSB602</i>	2
HSB608	<i>Practicals based on course HSB603</i>	2
	<b>Total</b>	<b>22</b>
	<b>Grand Total</b>	<b>64</b>

## SEMESTER – I

### Paper – I

#### **HSB101: INTRODUCTION TO FOODS AND HUMAN DEVELOPMENT**

**(Credit 4)**

#### **Section A: INTRODUCTION TO FOODS**

**(Credit 2)**

**Foods History:** Composition and function of food, classification, Food hygiene, cost availability; quality, and quantity of foods, food tables, food groups. Energy foods, body building foods, protective food. Cookery Kitchen; Layout, arrangements, fuel, sanitation & cleanliness. Kitchen and dining equipments. Principles and objects of cooking. Methods of preparation prior to cooking. Comparative study of cooking. Comparative study of various methods of cooking. Effect of cooking on nutritive value, colour, appearance and palatability, serving of food.

**Cereals & Cereal Products:** Importance, composition and structure of cereal grains, Processing of cereals & storage; methods & their limitations, Germination. Enrichment and fortification of cereals.

**Pulses and legumes:** Importance, composition, processing of pulses **Vegetables & Fruits:** Classification, composition, pigments, flavour compounds, selection, purchase, storage and Home Care.

**Milk & Milk Products :** Composition, processing, uses in cookery, effect of heat, enzymes, acids and salts on milk & milk products

**Flash Foods:** Egg; Structure, composition, quality of eggs, uses in cooking. Meat, Fish, Poultry; Classification, structure, composition, ripening, ageing, factors affecting tenderness of meat, buying and care in Home. Gelatin; composition, properties & uses. Beverages; Tea, coffee, chocolate & cocoa powder. Other Beverages; aerated beverages, juices. Nuts & Oilseeds; Composition, role in the diet. Spices & Condiments; Properties, uses & abuses in diet. Adulteration, Food Standards; ISI, Agmark, FPO, MPO, PFA, Additives, food laws.

**Food Microbiology:** Brief history of food microbiology and introduction to important micro-organisms in foods. Food Spoilage; Contamination and micro-organisms in the spoilage of different kinds of foods & their prevention, Cereal & cereal products, vegetable & fruits, fish and other sea foods, meat & meat products, Egg & poultry, milk & milk products, canned foods. Public Health hazard due to contaminated foods; Food borne infections and intoxications; symptoms, mode and source of transmission and methods of prevention. Fundamentals of control of micro-organism in foods; extrinsic and intrinsic parameters affecting growth and survival of microbes, use of high & low temperature, dehydration, freezing, freeze drying, irradiation and preservatives in food preservation. Industrial & pharmaceutical microbiology.

Indices of food, milk & water sanitary quality; Microbiological criteria of foods, water and milk testing (Bacteriological analysis).

## Section B: HUMAN DEVELOPMENT

**(Credit 2)**

**Concept of Human Development:** Meaning and importance of Human Development, Principles of Development, meaning of terms “Growth” and “Development”, Stages of Human Development, Biological and Environmental and other influences on Development and related issues.

**Prenatal Period:** Reproductive System (Male and Female) conception, Stages of Prenatal Development, Genetic and Environmental factors, Birth process and complications, Maternal Health and Care during pregnancy vaccination schedule

Hazards during prenatal development, Immediate care of new born, Types of feeding Natural and Artificial, Weaning, Infant and mother mortality and morbidity, Child rearing Practices.

**Infancy and Babyhood:** The neonate upto 4 weeks; Physical, Physiological, Cognitive and Social Capabilities, 4 weeks to 2 years; Physical and motor Social and emotional, cognitive and language development, sensory and perceptual development, Developmental tasks of infancy, milestones, factors influencing development, Early Environment and its importance, effect of environmental derivation

**Childhood (2 – 12 years):** Physical, motor, social, emotional, cognitive and language development, Development tasks and Milestones, Preschool Education: Concept and Significance, Problems of preschool period; obstinacy, negativism, aggression, shyness, thumb sucking, nail biting, enuresis, temper tantrums, sibling rivalry, eating disorders. Emotional Development; development of positive and negative emotions, factors influencing emotions, Peer Group; Importance, types and functions, function of school, family and community in growth of children,

**Adolescence (13 – 18 years):** Physical Development; Puberty, Growth spurt primary and secondary sex characteristics early and late maturing adolescents, Development of Identity; Definition, body image, role confusion and ego identify, Social development; Peer and heterosexual relationship, Relationship of adolescent with family and teachers, social interests, Vocational interests; Choosing a career, factors affecting career choice, Vocational guidance and counseling. Problems; Heightened emotionality, drug and alcohol abuse, psychological problems, teenage pregnancy, sexually transmitted disease (AIDS, delinquency)

**Young Adult hood and middle Adult hood (20 years – 60 years):** Development task, milestones, Development of Self, physical and Psychological changes, sex role issues and implications for adult hood. Responsibilities and adjustment (New family work place, parent hood, financial security stresses (at family & work place) pre-retirement and leisure.

**Old age and ageing:** Physical, Physiological, Cognitive and memory Changes Status and statistics of aged in India, Governmental and non-governmental efforts towards issues related to aged, Special needs of elderly persons, Retirement – Effect of retirement on self, family, society, financial problems faced, leisure time activities for aged, Psychological changes before death, The life review, preparation and coping strategies

## PRACTICAL

### HSB102: INTRODUCTION TO FOODS AND HUMAN DEVELOPMENT (Credit 2)

#### **Part A: Introduction to Food**

- 1 Preparing different food items by using different cooking methods and calculation of nutrients based on food composition table.
- 2 Study of the effect of cooking on carbohydrates, fats, protein, texture and colour.
- 3 Preparing & Serving food items  
pulses – vegetable, milk, paneer, khoa, desserts, cakes, biscuits/cookies and snacks.
- 4 Study of Microorganism through permanent slides.
- 5 Demonstration of microbiological analysis of water, milk & food for enumeration of standard plate count & coliform count.

#### **Part B: Human Development**

- 1 Study of Reproductive system through Models and charts.
- 2 Visit to various Institutions and report writing  
Maternity welfare centers  
Old age homes  
Creche  
Ckky lqIkj / fdÓksj lnu  
Ukkjh fudsru

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1. Tauro P., Kapoor K.K., Yadav K.S., 1996, An Introduction to Microbiology, Wiley Eastern Limited.
2. Wilson E.D., Fisher K.H. and Garcia P.A., Principles of Nutrition, John Wiley & Sons, New York, 1980.
3. Potter N.N., Hotchkiss J.H. (1996) : Food Science, Edition 5, CBS Publishers and Distributors, New Delhi.
4. MacMillan M. (1984) : Experimental Foods Laboratory Manual, Surjeet Publications.
5. Frazier W.C. and Westroff D.C. (1988) : Fourth Edition, Food Microbiology, McGraw Hill INC.
6. Prevention of Food Adulteration Act (1994) : Govt. of India.
7. Schiamberry L.N. (1988), Child & Adolescent Development, McMillan Publishing Company, New York
8. Papalia, D.E. & Olds S.W. (1978), Human Development, McGraw Hill, New York
9. Child Development – A Topical Approach, Alison-Clarke-Stewart, Susan-Friedman-Joanne Kock
10. Berk, L.E. (1996), Child Development, New Delhi, Prentice Hall

## SEMESTER – II

### Paper – II

#### HSB201: INTRODUCTION TO CLOTHING TEXTILES AND FAMILY RESOURCE MANAGEMENT

(Credit 4)

#### Section A: INTRODUCTION TO CLOTHING TEXTILES

(Credit 2)

**Introduction:** Concepts and classification of textile fibres; Natural fibres; Cotton, flax, jute, hemp, remie, silk, wool, asbestos, mineral fibres (structure, properties and formation). Man made fibres; Rayon, acetate, nylon, polyester, acrylic and glass fibres. Blends and mixture.

**Yarn:** Classification; Simple yarn, complex yarn, fancy yarn, spun yarn, filament yarn. Twist, crimp, yarn numbering system, tex, denier, count. Methods of fabric formation.

**Weaving:** Introduction to weaving, Loom, its parts and working, Basic weaves and its derivatives, Fabric count. Non woven fabric construction; felts and non woven. Knitted fabric; Warp knitting, weft knitted & circular knitting.

**Fabric finishes:** Processes of removing impurities from fabric; scouring, degumming, carbonizing. Basic finishes that alter texture; felting, singering, stiffening, decatazing. Surface finishes; Bleaching, delustering, calendering, beetling, napping, flocking, burnt out design, tentering, shearing and brushing.

Functional finishes – water proofing, water repellent, shrinkage control, flame retardation, mildew proof, moth proof, antibacterial, anti-static.

**Dyes and Dyeing:** Classification of dyes & their applicability; Natural and synthetic dyes; Direct dye, acid dye, basic dye, Vat dye, sulphur dye, azoic dye, mordant dye, disperse dye, reactive dye, pigments. Methods of dyeing; Jet, Jig, winch & warp beam. Techniques of dyeing; Solution dyeing, fibre and yarn dyeing, piece dyeing, cross dyeing, union dyeing. Colour fastness of fabric for washing, perspiration & light.

**Printing:** Hand printing methods; block printing, stencil, screen printing, spray printing, tie & dye, batik, warp printing. Machine printing; roller, screen printing, heat transfer printing, flock printing.

**Laundry:** Introduction to laundry process, materials and equipments in laundry.

Hard and soft water; Temporary and permanent hardness, methods of softening water, chelating and sequestering agents. Soap and detergents; Definition, chemical nature, manufacturing, properties and cleansing action.

**Bleaches:** Classification, application of bleaches to various fibres & fabric. Additives used in laundry; optical brightener, bluing agent. Starches, stiffening and softeners. Principles of laundering; Hand washing methods, washing machine.

Dry cleaning & Label. Disinfections of clothes.

**Stain removal:** Classification of stains, principles of removal, types of stain removers, techniques of removal. Care & Storage of apparel and household linen.

**Traditional Embroidery:** Types & techniques, traditional embroidery of India, Kashida of Kashmir & Bihar, Kantha of Bengal, Kasuti of Karnataka, Embroidery of Kutch & Kathiavar, Phulkari of Punjab, Chikankari of Lucknow, Manipuri Embroidery, Chamba Rumal, Quilting of Bihar, Orissa. Value addition of fabric (with respect to entrepreneurship)

## Section B: FAMILY RESOURCE MANAGEMENT

(Credit 2)

**Management as a discipline and Science:** Interdisciplinary nature of management, Stages of development, Classical Organization Theory, Behavioral theory, Qualitative. Relevance to family resource management; Meaning, Nature and scope. Management Abilities; Principles of Management:- Technical, Conceptual, Human. Process of Management & functions; Planning, controlling and Evaluation. Motivation for Management; Values, goals & standards. Decision Making; Meaning, Types of decision, Mode of decision making, Cost-benefit analysis, Decision tree

**Resources:** Type of Resources. Classification and Characteristics of Resources; National & global, human, material, economic & non-economic. Principles in the use of resources; Scarcity utility, accessibility, exchange, transferability, substitution, reverse & investment, exchange linkage. Management of Resources; Time and Energy Management, Time as a resource, time orientation and perception, planning & using time resources effectively. Energy as resource; Identifying energy resources and factor affecting energy consumption, work simplification

**Financial Management:** Money as a resource in economic welfare; Planning, Family life stages & use of money, Budget ; Types, steps, advantages and disadvantages, Income; Productive income, money income, hidden income, Savings & Capital Investment; Objective, types of saving & investment; Saving Institution Schemes, Credit; Types, sources, rural, urban use of credit and credit instrument to increase level of living of urban or rural households.

**Concept of Ergonomics:** Scope of Ergonomics in home and other occupations; Nature of work in household & other occupations; Interdisciplinary and applied nature of Ergonomics as a field of study.

**Introduction to foundation of art:** Elements of design; Line, Size, Form, Structure, Space, Pattern, Shape, Light, characteristics & classifications

**Designs:** Definition & types of structural & decorative, Principles of design; Definition & their characteristics & types, Balance, Harmony, Scale, Proportion, Rhythm, Emphasis. Study of Colours; Classification dimensions, colour schemes & effect

## PRACTICALS

### HSB202: INTRODUCTION TO CLOTHING TEXTILES AND FAMILY RESOURCE MANAGEMENT

(Credit 2)

#### Part A: Introduction to Clothing Textiles

- 1 Identification of fibres – Visual inspection, burning, microscopic and solubility test.
- 2 Identification of yarns.
- 3 Demonstration on part of looms & motion of loom.
- 4 Preparation of basic weaves sample.
- 5 Warp and weft yarn counting in fabric.
- 6 Identification of fabric finishes and collection of samples.
- 7 Dyeing of cotton, wool & silk with natural & synthetic dyes i.e. Direct, naphthol, acid, reactive etc.
- 8 Preparation of sample by Tie & Dye Techniques & Batik.
- 9 Preparation of samples by Block printing, Stencil printing, screen printing & spray printing.
- 10 Bleaching, whitening & starching.

- 11 Stain removal.
- 12 Laundry of cotton, silk, wool & synthetic.
- 13 Making samples by using contemporay embroidery & samples of traditional embroidery.
- 14 Visit to weaving centre & any one museum.

#### **Part B: Family Resource Management**

1. Preparation of colour wheel & colour scheme
2. Flower arrangement/Different areas
3. Gift wrapping & preparing decorative articles
4. Sketching of elements of arts
5. Sketching of principles of design
6. Motif development – reducing & enlarging
7. Study of various types of cheques & saving schemes
8. Work simplification techniques
9. Table setting and decoration

#### **References :-**

1. Dulekar Durga (1976) : Household Textiles & Laundry Work, Delhi, Atmaram & Sons
2. flag o'Unk % oL= foKku ,oa ifj/kku
3. lkfo=h iafMr ,oa 'kf'kdyk f'kans] Hkkjrh; d'khnkdkjh] xksfoUn oYyHk iar d'f'k ,oa izkS|ksfxd fo'ofoky;] iaruxj
4. Hallen & Saddler, Textiles, Macmillan Company, New York.
5. Nickell and Dorsey, 1976. Management in Family Living (4<sup>th</sup> Ed.) Wiley Eastern Limited, New Delhi
6. Gross, Crandall & Knoll, 1980, Management for Modern Families, Prentice – Hall, Inc. Englewood cliffs, New Jersy
7. Grossack, I.M. & Martin, D.D. (1980) : Managerial Economics, Little Brawn & Co.
8. Adhikari, M. (1978), Economic Environment of Business, Sultan Chand

## SEMESTER – III

### Paper – III

#### HSB301: HOME SCIENCE EXTENSION EDUCATION AND HUMAN NUTRITION

(Credits 4)

#### Section A: HOME SCIENCE EXTENSION EDUCATION

(Credit 2)

**Extension Education:** Concept, meaning, philosophy, principles, aims & objectives of extension education, models; Technology; innovation; transfer model, Social Education Model, Indigenization Model, Social Action/Concretization Model, Empowerment of participation Model, Relationship with other social science subjects. Brief History of extension activities in India (present and past Independence), Extension Teaching Methods, Difference between formal & extension education, Steps in extension teaching

Classification of extension teaching methods according to different criterias; according to use, form & nature, function, steps in extension teaching, Learning Objectives, Innovation Decision Process, Adoption process, Adopter's Category, Combined use of extension teaching methods (purpose, significance & types of combinations), Types of demonstrations (method, result & combined demonstration), Group Discussion, Campaign, Teaching Through Village Leaders, Criteria for Selection of Extension Teaching Methods, Factors affecting Extension Teaching Methods, Extension Teaching Aids, Circular letters, Leaflet, pamphlet & bulletin, Newspaper, Blackboard, Photograph, Posters & charts, Flash card, Flannel graph, Exhibition & Melas, Educational Tour, Talk (Symposium, seminar, workshop, panel, forum, debate & elucution, competition) Specimen, Model & exhibits (3 dimensional aids); Radio & T.V. Programme (Electronic aids)/L.C.D. Projector, Tape/cassette Recorder, Microphone speaker/Public Address System, OHP, Epidiascope, Slide Projectors, Camcorder, Films, Puppets, Traditional Folk programmes, Educational Psychology & its application to extension education, Concept, meaning & aim of education psychology, Relationship between educational psychology & extension education, Objective and contribution of Psychology, Intelligence, emotions & motivation (concept, related Theories, types, importance, use in extension teaching), Psychology of Learning; Definition, meaning & concept of Teaching, Principles of Teaching; Qualities of a good Teacher, Guidelines for the teacher, Teaching plan (method of preparation, essentials & precautions), Teacher evaluation (concept & criterias), Some psychological terms & their definition; Attention & Perception, Thinking, Conflicts, Psychological barriers, Propaganda

**Communication:** Concept of communication – meaning, functions, problems & barriers, Elements of communication process, Communication media – meaning, classification, advantages & limitations, Importance of communication in extension work, Communication Models, Functions of Communication, Communication Channels, Communicator – Communicate relationships; Orientation, Empathy, Feedback, Physical Interdependence, Credibility, Interaction, Homophily, Heterophily, Feedback in communication & role of feedback in Extension Education, Communication and extension approaches; Individual approach, Group approach, Mass approach

**H.Sc. Extension:** Concept, meaning of H.Sc. extension, History of H.Sc. extension education, History of H.Sc. extension education in India, Various H.Sc. associations across the world including India, Various H.Sc. Institutions / Universities in India, Role of H.Sc. in Rural Development

## Section B: HUMAN NUTRITION

### (Credit 2)

**Concept of Nutrition:** relation of nutrition to health, optimum nutrition, adequate nutrition, malnutrition, growth of the Science of nutrition with particular reference of India. Composition of human body, structure and functions of digestive organs, excretion of waste products, study of urine, sweat and faeces, blood body fluids and hormones, Microscopic study of stomach, tissues of human body, digestion absorption and metabolism of foods. Brief history of Nutritional Science, Scope of Nutrition. Minimal Nutritional requirements & RDA – Formation of RDA and Dietary guidelines – Reference Man and Reference Woman. Human Body Composition and Changes through the life cycle. Energy in Human Nutrition – Energy Balance, Assessment of Energy Requirements, Deficiency & Excess. Introduction to Biochemistry – Definition, objectives, scope and inter-relationship between biochemistry and other biological sciences.

**Carbohydrates:** Definition, classification, structure and properties, Digestion and Absorption, Blood glucose and effect of different carbohydrates on blood glucose, Glycemic Index, Significance of Dietary Fibre. Proteins – Definition, classification, structure & properties of : amino acids – Essential & non-essential & proteins : Assessment of protein quality (BV, PER, NPU), Digestion and Absorption and Deficiency (PEM). Lipids – Definition and classification, structure, properties, significance of acid value, iodine value and saponification value, Digestion & absorption.

**Vitamins:** Physiological role, bioavailability, requirements, sources, deficiency and excess (Fat soluble and Water soluble). Minerals & Trace Elements – Physiological role, bio-availability and requirements, sources, deficiency and excess (Calcium, Phosphorus, Magnesium, Iron, Fluoride, Zinc, Selenium, Iodine, Chromium). Water & Electrolyte; Functions, Requirements. Enzymes; Definition, Types & Classification of Enzymes, Enzyme kinetics including factors affecting velocity of enzyme catalysed reactions, Enzyme inhibition, Mechanism of enzyme action. Hormones; Biological role of hormones of Pituitary, Adrenal Cortex & Medulla, Thyroid, Parathyroid, Pancreas. Physiology of Nutrition; Digestive System, Circulatory System, Excretory System. Intermediary metabolism

**Community Nutrition:** Community Nutrition or a field; Public Health Nutrition, Goals for Nutrition programmes, planning, implementation and evaluation of nutrition education programme, food fads & food habits. Introduction to national nutrition programmes & policies; Integrated Child Development Services (ICDS); National Rural Development Programme (NRDP); National Rural Employment Programme (NREP); Miscellaneous monofocal programmes. Role of international agencies and programmes in community nutrition; Food & Agriculture Organization (FAO); World Health Organization (WHO); United Nations Childrens Fund (UNICEF); Other voluntary & government agencies. Direct nutritional assessment of human groups; Nutritional anthropometry; Biochemical tests; biophysical tests; clinical signs; individual nutrient deficiencies. Diet Survey methods at national, institutional, family and individual level. Indirect nutritional assessment of human groups : Indicators and their use; health policy indicators; social and economic indicators, indicators of the provision of health care; coverage by primary health care; basic health status indicators.

## PRACTICAL

### **HSB302: HOME SCIENCE EXTENSION EDUCATION AND HUMAN NUTRITION** **(Credits 2)**

#### **Part A:- Home Science Extension Education**

1. Preparation and use of following aids; Circular letter, Leaflet and Pamphlet, News paper, Flash cards, Poster, Chart
2. Arranging an exhibition/mela in a community.
3. Excursion tour to an institution teaching H.Sc.
4. To get familiar with use and care of projected aids.
5. Attending and preparing report of departmental seminar.

#### **Part B:- Human Nutrition**

1. Preparation of dishes rich in : Energy, protein, fat, fiber, calcium, iron, vitamin A, vitamin C, thiamine, riboflavin and niacin.
2. Reaction of mono, Di and polysaccharides and their identification in unknown mixtures, Iodine test for cooked and uncooked starch & dextrin.
3. Reactions of different types of fats (saponification and iodine value)
4. Reactions of proteins
5. Study of microscopic structure of tissues, liver, kidney, stomach, intestine, blood
6. Evaluation of nutritional status : By Anthropometry survey, Dietary survey
7. Other determinants of family nutrition : Socio-economic status survey, using SES scale,
8. Weaving practices.
9. Immunization practices.
10. Sanitary practices.
11. Dietary practices, fads and fallacies during illness, pregnancy, lactation and other special conditions.
12. Assessment of nutritional status using above criteria in a community set up and report writing.

**References:-**

1. Reddy A, Extension Education, Bapatia, India, Shree Laxmi Press
2. Pillai K.S., ABC of Non-formal Education, ITB Indraprastha Estate, New Delhi, India Adult Education Association
3. Dhama O.P. & Bhatnagar O.P., Education & Communication for Development, Oxford & I.B.H. Publishing Co. Pvt. Ltd., New Delhi
4. Sampath K., Pannirselvam A., Santhanam S., Introduction to Educational Technology, New Delhi, Sterling Publishers
5. Swaminathan M. (1985) : Essentials of Food and Nutrition, Vols. I & II, Ganesh & Co., Madras
6. Indian Council of Medical Research (1989) : Recommended Dietary Intakes for Indians
7. Indian Standards Institution (1985) : ISI Handbook of Food Analysis, Parts I to XI, Manak Bhawan, New Delhi
8. Sundararaj P and Siddhu A. (1995) : Quantitative tests and Quantitative procedures in Biochemistry – A practical manual, Wheeler Publishing
9. Lehinger A.K., Nelson D.L. and Cox M.M. (1993), 2<sup>nd</sup> Ed. Principles of Biochemistry, CBS Publishers and Distributors
10. Guyton A.C., Hall J.E. (1996) : Textbook of Medical Physiology, 9<sup>th</sup> Ed. Prism Books (Pvt.) Ltd., Bangalore
11. Obert J.C. (1986) Community Nutrition, 2<sup>nd</sup> Edition, MacMillan Publishing Co., New York

**SEMESTER – IV**

**Paper – IV**

**HSB401: INTERIOR DESIGN AND CLOTHING CONSTRUCTION**

**(Credit 4)**

**Section A: INTERIOR DESIGN**

**(Credit 2)**

**Housing:** Family's Housing Needs, Protective, economic, affectional, social standard of living housing goals, style, function, occupation, Factors influencing selection and purchase of site for house building, Legal aspects, location, physical features, soil conditions, cost, services, House Planning, Reading house plans Grouping of rooms, orientation, circulation, flexibility, privacy, spaciousness, services, aesthetics, economy light and ventilation

**Planning different rooms:** Living room, dining room, bedrooms, kitchen, store room, toilet, passage, staircase, Financial Consideration, Availability of funds for housing, Housing Development Finance Corporation, Cooperative Housing Society, Life Insurance Corporation, Cooperative Banks, Loan

from Provident Fund, Finance Corporation of India, Residential structural features of architecture Foundations, footing, plinth, beams, columns, walls, slabs, floor, ceiling, window, doors, staircase, Types of building materials and its characteristics & uses, Gardening plan & indoor gardening, State & Central Housing Scheme; National Housing Policy, Urban Land (Ceiling & Regulation) Act, 1976, Rent Control Act and Govt. Policies & Programmes, Housing problems, causes and remedial measures, Housing Standards & Legislation

**Interior Planning & Decoration:** Introduction to interior planning & decorations

Application of elements and principles of design in interior planning and decoration, Furniture; Furniture design based on anthropometric dimensions

Styles of furniture; Traditional, contemporary and modern, Selection of furniture for comfort, rest & relaxation for work, for storage, Arrangement of furniture for living, sleeping, dining and multipurpose rooms, Upholstered furniture materials, techniques and designs, Furnishing Fabrics, Types of curtains; Draperies, floor coverings, rugs and carpets, cushion covers, slip covers, bed linen and table linen

Selection and use, Functional & decorative accessories for interiors, painting, sculpture, pots etc., Lighting in interior; Lighting plans for illumination and special effects, Lighting sources; Developing a lighting plan for different areas, Kitchen Modular Design; Types of kitchen, Kitchen Geometry; Work height of different work areas and storage areas, space dimensions of different work centres and work areas, Materials; Floor, walls, sink, ceiling and its characteristics, platforms, storage etc., Types of finishes, Essential services needed in a kitchen,

Water supply, Hot & cold, tap fittings, water purifiers, Electricity services; electricity current, air purifier, MCB fuses, exhaust, Drainage services; Waste water drainage system, waste disposal, cleaning agents & equipments

**Mechanics:** Introduction to properties of matter, solid, liquid and gases, Forces; Centripetal and centrifugal forces, spin dryer in washing machine, Friction, Advantages and disadvantages; Concept of ball bearing, sewing machine, Heat; Sources & properties of heat, heat and temperature, heat transfer, Application of heat transfer; Household thermometers, Pressure cooker, Refrigeration; Refrigerator, Compressor and absorption type.

**Light:** Introduction to light, properties of light, velocity of light, Electricity and Magnetism, Static and current electricity, Basic electric circuits, Electroplating, Electrolysis Thermal effect; Automatic, steam iron, toaster, geyser, Water heater

Induced current; Transformer, House Wiring, Distribution of current to the house, kilowatt hour meter, Circuits; Number of circuits in a house, Choice and care of motor driven appliances; Mixer, blender, Materials used for household equipments

Cleaning and care of different materials; Metal, glass, wood, paints, upholstery, floor & floor coverings, electrical appliance and decorative articles

## **Section B: CLOTHING CONSTRUCTION**

**(Credit 2)**

Traditional textiles and costumes of India, Dyed & Printed textiles of India; Kalamkari, Patola, Pochampalli, Ikat of Orissa, Tie & Dye of Tamil Nadu, Woven Textiles of India; Brocades, Shawals of Kashmir, Muslins of Bengal, Silk of Karnataka, Cotton of Kerala, Woven sarees of different states of India, Traditional Costumes of India; Costumes of Men & Women & Traditional marriage costumes of different states of India (Details of costumes, jewellery & accessories), Elements and Principles of design as applied to apparel designing, Figure types, silhouettes, Sewing equipments and other tools required for drafting, cutting, stitching, sewing machine; Part of machine, their use, care & remedy, Body measurement; Anthropometric measures and method of taking body measurement for

different garment, General construction techniques for garment; Drafting, folding, lay out, marking and cutting of pattern pieces, Essentials of Children's Clothing , Importance of Clothing, Psychological effect of clothing on children, Effect of clothes and child's growth, Sociological & Psychological aspects of clothing, Drafting of Jhabla, Baby frock, plain frock, shirt, trouser.

**Pattern Making:** Techniques of flat pattern making, Principles and application of flat pattern for different styles of bodies, skirt and sleeves, slash & spread method. Fabrics for garment making; Handling of different types of fabrics, selection of fabric for different garment, study of texture, surface, colour in relation to garment design, material required for different garment. Sources of inspiration for apparel designing fashion and current fashion trends.

**Seams:** Types of seam, seam finishes (Darts, Tucks, Pleats, Gather, Yokes, Pockets, Collars, Loops & fastners, Trimmings, Stay Stitching, Lining, Neckline, Interlining, Top Stitching, Facing, Interfacing), Sewing supplies.

## PRACTICAL

### HSB402: INTERIOR DESIGN AND CLOTHING CONSTRUCTION

(Credits 2)

#### **Part A :- Interior Designing**

1. Learning architectural symbols
2. Drawing of house plans for different income levels
3. Planning of different kitchen layouts (considering various kitchen sizes)
4. Study of furniture detailing
5. Furniture layout for different rooms & drawing of designs
6. Presentation of Market survey of furnishing fabrics
7. Drawing of kitchen garden layout
8. Interior design for small flat/large residential space/different rooms
9. Development of designs and construction of any three of undermentioned items; cushions, curtains, carpets, doormats, tablemats

#### **Part B:- Clothing Construction**

1. Visit to museum & report writing on traditional textiles of India.
2. Group Discussion on traditional costumes of India.
3. Illusion of different garment on Silhoutte.
4. Preparation of Bodice block, adult.
5. Drafting of sleeves basic & variation.
6. Drafting of collar & its variation
7. Construction of frocks, trouser, shirt.
8. Preparation of samples of seams dart, tucks, pleats, pockets, collars, loops, fastner.
9. Sketching of designs of variation in frocks.

#### **References:-**

1. Cherunilam, Frances & Heggade, Odeyan; D (1987) : Housing in India, Bombay, Himalaya Publishing House
2. Again Tessie (1970) : The House : Its Plan & use, New York, J.B. Lippincott Co.
3. Deshpande R.S. (1980) : Modern Ideal Homes for India (9<sup>th</sup> Ed), Smt. L.S.Deshpande for Deshpande Publications Trust

4. Deshpande R.S. (1980) : Building your own House, United Book Corporation
5. National Building Organization – Monograph of Housing Statistics
6. Ball Victoria Kloss (1982) : Art of Interior Design, John Wiley & Sons
7. Ruth Morton : The Home and its furnishings, U.S.A. McGraw-Hill, 1953
8. Complete Guide to Sewing, The Reader's Digest Association, Inc., Pleasantville, New York/Montreal, Canada
9. Pandit Savitri, Manual for Children's Clothing, Orient Longman Limited, Bombay
10. Zarakkar K.R. : Zarakkar System of Cutting, Bombay
11. Doongaji (1975) : Basic Process & Clothing Construction, New Delhi, Raj Book Dep.
12. Brij Bhushan, Jamila : The Crafts of Weavers, The Costumes & Textiles of India, D.E. Tarapore Valla Sons & Co.

**SEMESTER – V**  
**Paper – I**

**HSB501: HOME SCIENCE EXTENSION EDUCATION AND RURAL DEVELOPMENT**  
**(Credit 3)**

**Community Development:** Meaning, objectives, organization of Community Development, Scope of Community Development Programme Types of Community Development Programme; Integrative Type, Adaptive Type, Project Type, Various community development programmes, Govt. sponsored programmes for family development; DWCRA, IRDP, NREP, RLEGP, TRYSEM etc. (source of funding), Cooperative Movement (Brief history of cooperative movement in India), Panchayati Raj & Democratic Decentralization, Concept & evolution of Panchayati Raj, Organization of Panchayati Raj Institutions, Functions & Importance of Panchayat in rural development, Five Year Plans; Concept & evolution of Five Year Plans, Major contribution of Five Year Plans in rural development, Various community development and rural development programmes under Five Year Plans, Leadership Development, Concept & definition of leader & leadership, Types of leaders; Principles of democratic leadership, Personality Dynamics of leader, Functions of a leader, Factors determining effectiveness of leader, Role of leader in group mobilization, Gender and Development, Concept of development, Indicators for development, Women as a partner in the developmental process & national planning, Approaches of Development, Shifts from welfare approach to development & empowerment approaches, National efforts for Development of Women; National Policy on Women, Role of National Commission for Women

**Rural Sociology:** Concept, meaning, definition of Rural Sociology, Nature & scope of Rural Sociology, Rural Sociology in India; Origin & development, Importance of Rural Sociology in India, Subject matter of Rural Sociology, Study methods of Rural Sociology, Functions & utility of rural Sociology, Rural Social System, Indian Village (meaning & concept), Characteristics of Rural Society, Rural and Urban life, Rural Social Problems, Indian rural social structure, Rural development and programme; Integrated Rural Development Programme, Rural Reconstruction & Planning

**REFERENCES :-**

1. Patnayak Rama, Rural Development in India, New Delhi, Vikas Publishing House Pvt. Ltd.
2. Thingalaya N.K., Rural India – Real India, Bombay, Himalaya Publishing House
3. Indian Journal of Extension Education, The Indian Society of Extension Education, Division of Agricultural Extension, IARI, New Delhi – 110012

4. Desai, Vasanth, Rural Development Programme & Strategies, Bombay, Himalaya Publishing House

**Paper – II**  
**HSB502: CONSUMER ECONOMICS**  
**(Credit 3)**

**Family as an economic unit:** Family types, functions, Economic goal of family, economic demands in different stages of family life cycle, Sources of money income; wages, salaries, rent, profits, interests, transfer of payments, Consumer economics, meaning and definition, Market; Definition, types of markets, characteristics, functions, changing business environment; Telemarket, global, privatisation of monopolistic services, e-business & e-commerce, Wants; Definition, characteristics, Law of diminishing marginal utility, equimarginal utility, Demands; Law of demands

Price fixation

**Consumer and Consumer Problems:** Definition of consumers, choice and buying problems of consumers, faulty weights and measures, adulteration and other malpractices Type of Products; Consumer durables and non-durables, consumer items Services; Types of services available to consumers like (Transportation, health, education, communication, gas distribution, electricity supply, telephones etc.), Role of Standards in Consumer Protection; Meaning of standards, benefits of standards to consumers and manufacturers, product certification & role of certification,

**Quality Control and Standardization:** Introduction to quality control, advantage & disadvantages, application of quality control and standardization for products like (food, textile, consumer durables, materials and consumer items), Consumer Protection Law; Importance and scope, The sale of goods act 1930, The agricultural produce (grading + marketing 1937), Prevention of Food Adulteration Act, 1954, The Essential Commodities Act, 1955, The Monopolies and Restrictive Trade Practice Act, 1969

The Standards of Weight & Measures Act, 1976, Prevention of Black Marketing and Maintenance of Supplies of Essential Commodities Act, 1980, The Bureau of Indian Standards Act, 1986, Advertising Regulation & Consumer Protection under the law of court, 1986, Role of different organizations/Agencies towards consumers, Ministry of law and justice, Consumer guidance Society of India, Consumer cooperative, Govt. & Municipal agencies, Grahak Panchayat, Advertising & Labelling Information, Introduction to advertisement, Role of advertising in consumer decision

**Types of advertising:** Newspaper, magazines direct advertising, radio and television, Outdoor advertising; Advantages & disadvantages of each

**Entrepreneurship:** Definitions, need, scope and characteristics of entrepreneurship, entrepreneurship development and employment promotion, Environmental scanning and opportunity identification; Methods, sources and types of opportunity, Assessment, criteria and profiling opportunities, Infrastructure and support system, Industrial support agencies, Procedures and steps involved in setting up an enterprise, Whom to contact for what? Schemes of assistance, Sources of information and industry organizations, Laws governing Business operation, Indian Contract Act & Sales of Goods Act

**References :-**

1. Gordon Lee (1972), Economics for Consumers, D. Van Nostrand Company, New York
2. Singh Gurbax (Comp) (1990) : Law of Consumer Protection, Jaipur, Bharat Law Publishers
3. Kewal Krishan Dewett & Adarsh Chand (1981) : Modern Economic Theory, 12<sup>th</sup> Ed., Shyamal Charitable Trust

4. Gupta B.D. (1973), Consumption Pattern in India, Tata McGraw Hill

**PRACTICAL**  
**HSB506 (BASED ON HSB501 AND HSB502)**  
**(Credit 3)**

**Part A: HOME SCIENCE EXTENSION EDUCATION AND RURAL DEVELOPMENT**

1. Visit to a village to gain knowledge through standard questionnaire about;
  - (a) The Rural Society
  - (b) The Gram Panchayat, Regional Committee  $\frac{1}{4}$  {ks=h; lfefr $\frac{1}{2}$  at block level and their functioning.
2. Visit to cooperatives (Dairy, Agricultural,  $\frac{1}{4}$ efgyk lgdkfjr $\frac{1}{2}$  and to know about their functioning pattern.
3. To know about different programmes running for rural development and to interact with the people involved.
4. To develop a training programme for urban society for different persons.
5. Educational tour to institutions related to the course.

**Part B: CONSUMER ECONOMICS**

1. Market survey on Products with regards to advertisement, labels, packaging.
2. Impact of advertising on consumer buying on children and women.
3. Collection of various advertisements and classification by identifying intended consumer appeal.
4. Assignments.

**Paper – III**  
**HSB503: FUNDAMENTAL OF HUMAN DEVELOPMENT**  
**(Credit 3)**

**Methods of studying Human Development:** (case study interview, naturalistic observation and laboratory observation). Experimental methods, Data collection methods (cross sectional and longitudinal and sequential studies). Ethics of Research (ethical issues and standards). Introduction to theories of Human Development. Piagets's theory of Cognitive Development. Psychosexual theory of Sigmund Freud (Defiance Mechanisms, stages of Psychosexual development, Id, ego and super ego). Psychosocial theory of Erik Erikson. Traditional learning theories (Pavlov, Watson and Skinner).

**Social learning theory (Bandura):** Kohlberg's Theory of Moral Development. Theories of language acquisition. Maslow's self actualization Theory. Theory of Emotional Development. The psychology of behaviour perception, concept formation, reasoning and thinking. Imagination, creativity, memory, remembering and forgetting. Intelligence Motivation and Learning Early Childhood Education and Management Meaning, importance and origin in India. Different methods and philosophies of Early Childhood education

**Early childhood education centers:** Infrastructure and Administration, Staff building and Equipment, record keeping, parent meeting, Curriculum for ECCE centers, Importance of Science, nature, music, role plays and stories in ECCE programme, Understanding and guiding children, Child with special needs definition, terminology, history of studying disability in India. Different types of disabilities their definition, Classification, genetic and environmental causes, prevention, Rehabilitation facilities, Sensory Deficits (Auditory impairment, Visual impairment), Speech disability, Communication disorders, Cerebral palsy and orthopedic disability, Behavioural disorders, Mental Retardation

**REFERENCES :-**

1. Gangrae K.D. (1971), Community Organization in India, Popular Prakashan, New Delhi
2. State of World Children, UNICEF, Annual Publication
3. Parakesh B.S. (1985), Population Education – Inception to Institutionalization, NCERT, New Delhi
4. Bernard H.W. & Fullner D.W., Principles of Guidance, Bombay, Allied Publishers
5. Verma Hildebrand (1985) Guiding Young Children, New York, MacMillan Publishing Company
6. Hallan D.P. & Kauffman T.M. (1991), Introduction to Exceptional Children (5<sup>th</sup> Ed.), Boston, Allyn & Bacon

**Paper – IV**  
**HSB504: DIET THERAPY I**  
**(Credit 3)**

**Basic concepts of diet therapy:** Therapeutic adaptations of normal diet, principles and classification of therapeutic diets. Team approach to health care. Assessment of patient's needs. Routing Hospital Diets; Regular, light, soft, fluid, parenteral and enteral feeding.

Energy Modifications and nutritional care for weight management, Identifying the overweight and obese, etiological factors contributing to obesity, prevention and treatment, low energy diets balanced

energy reduction and behavioural modification. Underweight; Aetiology and assessment, high energy diets for weight gain, anorexia nervosa and bulimia, Diets for Febrile conditions, Infections and Surgical conditions

Etiological factors, symptoms, diagnostic tests and management of Upper GI tract disease – Diseases of Oesophagus and dietary management, Diseases of stomach and dietary management. Gastric and duodenal ulcers and dietary management, Etiology, symptoms, diagnostic tests and management of Intestinal diseases; Diarrhoea, Steatorrhoea, Diverticular disease, Inflammatory Bowel Disease, Ulcerative Colitis. Flatulence, Constipation, Irritable Bowel Syndrome, Hemorrhoids, Etiology, symptoms, diagnostic tests and management of Malabsorption Syndrome, Celiac sprue, Tropical sprue. Intestinal brush border deficiencies (Acquired Disaccharide Intolerance), Protein losing enteropathy, Anemias, Pathogenesis and Dietary Management: Nutritional Anemias, Sickle cell Anemias, Thalassemia, resulting from Acute Haemorrhage, Diseases of the Liver, Exocrine Pancreas and Biliary System, Liver function tests and Nutritional care in Liver disease in the context of results.

**Dietary care and Management:** Viral Hepatitis, Cirrhosis of Liver, Hepatic Encephalopathy, Wilson's disease. Dietary care and management in diseases of Gall Bladder and pancreas – Cholelithiasis, cholecystitis, cholecystectomy, Pancreatitis etc.

### Reference

1. Anderson, L., Dibble, M.V., Turkki, P.R., Mitchell, H.S., and Rynbergin, H.J. (1982): Nutrition in Health and Disease, 17<sup>th</sup> Ed., J.B. Lippincott & Co. Philadelphia.
2. Antia, F.P. (1973): Clinical Dietetics and Nutrition, Second Edition, Oxford University Press, Delhi
3. Mahan, L.K., Arlin, M.T., (1992): Krause's food, Nutrition and Diet Therapy, 8<sup>th</sup> Ed. W.B. Saunders Company, London.
4. Robinson, C.H., Lawler, M.R., Chenoweth, W.L. and Garwick, A.E. (1986): Normal and Therapeutic Nutrition, 17<sup>th</sup> Ed., Macmillan Publishing Co.
5. Williams, S.R. (1989): Nutrition and Diet Therapy, 6<sup>th</sup> Ed. Times Mirror/Mosby College Publishing, St. Louis.
6. Raheena, Begum (1989): A textbook of foods, nutrition and dietetics. Sterling Publishers, New Delhi.
7. Joshi, S.A. (1992): Nutrition and Dietetics, Tata McGraw Hill Publications, New Delhi.

**Paper – V**  
**HSB505: FASHION DESIGNING**  
**(Credit 3)**

**Importance of Textile & Clothing:** Industry in the Indian Economy, Preparation of Bodice Block, Adult male & female

**Pattern making:** Techniques, flat pattern, principles and application of flat pattern for different styles, Developing paper pattern, pattern envelop, guide sheet and understanding the commercial paper pattern, Introduction to draping & draping of bodice block or dress form, Fitting; Factors affecting good fit, problems and remedies

Dart manipulation, Principles of figure drawing & sketching of body features, Drawing the form with different angles, Front, side, back, sketching of various designs of salwar kurta, drafting of salwar, kurta, blouse, petticoat, night suit, Fashion Terminology, concept, fashion cycle, fashion forecasting, component of fashion; Silhouette, details, colour, fabric, texture, seams, trims.

**Social & Psychological aspect of Clothing:** Fashion Industry, Nationalised Institutes related to Clothing & Textile courses, Portfolio development. Detailed study of Industrial machine & equipments used for Cutting, Sewing, Finishing, Embellishment. Finance for small scale industries & price fixation of garment, Colour forecast, Markets Scanning

**References :-**

1. Armstrong, Helen Joseph : Pattern making for Fashion Design, Harper Collins Publishers, New York
2. Bane A. : Flat Pattern Design, Mcgraw Hill
3. Goldsworthy, M. : Simple Dress-making, London, Mills & Boon Ltd.
4. Allen, Anne & Seaman, Jullian : Fashion Drawing : Basic Principles, B.T. Batsford, London

**SEMESTER – VI**

**Paper – I**

**HSB601: ADVANCED HOME SCIENCE EXTENSION AND COMMUNICATION**

**(Credit 3)**

**Adult Education (A.E.):** Formal, non-formal & Informal system of education, Concept, background, meaning & definition of A.E., Aim & objectives and goals of A.E., Role of Adult education in National Development, History of adult education in Post-Independent India; Gram Shikshan Mohim, Farmer's functional literacy project, Non-formal education for youth (NAEY), National adult education programme (NAEP), State adult education programme (SAEP), Adult education through voluntary agencies, National Literacy Mission (Achievement & Problems), Literacy scenario of nation, state, district & local areas. Choice of language for literacy, dialects Vs standard.

**Community participation in A.E.:** Training for Development, Concept, meaning & types of training; Institutional, Interactive, Participatory, Various Training Approaches; Creativity Training, Field Training, Group dynamics, Laboratory Training, Motivation Training, Self-awareness & self development, Techniques of Training including RRA, PRA, Media Development

**Genesis & growth of Folk media in India:** Types of folk media, folk music & dances, street theatre & its educational value, role of puppetry & different types of puppets, importance of folk media in development context & criteria for selection of folk media. Meaning, importance & role of visual communication and print media, type of printing (Design & layout), press & public relations, law related to press, agencies governing regulations & ensuring freedom of press, concept & meaning of graphic art, editorials, principles of editing. Concept, meaning & role of electronic media, various forms of electronic media (broadcast media, T.V., film media), their development in India, Types of programmes, their use in extension work, feedback mechanism for all types of electronic media.

**Advertisement and Visual Publicity:** Advertising as a mass communication process, Need for advertising communication, economic & social effect of advertising, Types of advertising media; print media, broadcast media, outdoor advertisement (hoardings, posters, bill board, bulletin board, electronic signs, litterbins, aerial methods, wall magazines), transportation media (mobile vehicles), exhibitions & trade fairs, non-media advertising, Techniques of Advertising; choosing content, layout & design, media planning, Ethics in Advertising, Programme Planning, Meaning, need & principles of project planning, Abilities needed by planner, Steps in programme planning, Criteria for good programme planning, Execution, monitoring & evaluation of extension programme

**Project Planning & Management:** Meaning & concept of project, Components of project management system, Steps for designing the project, Proposal writing, Cost estimation & financial management, Fund raising.

**PRACTICAL**  
**HSB606: ADVANCED HOME SCIENCE EXTENSION AND COMMUNICATION**  
**(Credit 2)**

1. Plan a programme keeping in mind the steps of Programme Planning.
2. Proposal writing
3. Organizing a Fair/Mela/Exhibition.
4. Excursion Tour

**REFERENCES :-**

1. McGivney, Veronica & Murray, Frances : Adult Education in Development – Methods & Approaches for Changing Societies, 19 B, De Mant Fort Street Leicester LE, U.K. National Institute of Adult & Continuing Education
2. Lynton Rolf P. & Pareek Uday, Training for Development Homewood, Iwrois, Dorsey Press
3. Jain R, Mass Media & Rural Development, Vol. II, New Delhi, Mank Publication Pvt. Ltd.

**Paper – II**  
**HSB602: DIET THERAPY II**  
**(Credit 3)**

**Diet in disease of the endocrine pancreas:** Diabetes Mellitus; Classification, Symptoms, diagnosis, Management of diabetes mellitus-clinical Vs. chemical control. Insulin therapy, Oral hypoglycemic agents, Glucose monitoring at home. Dietary care and nutritional therapy, meal plan (with and without insulin). Special dietetic foods, Sweeteners and sugar substitutes. Diabetes in pregnancy, elderly, surger, illness, Diabetic coma, Insulin reaction. Juvenile Diabetes. Patient education.

Hypoglycemia; Classification, symptoms, postprandial or reactive hypoglycemia, Early alimentary and late reactive hypoglycemia, idiopathic hypoglycemia, dietary treatment.

Diseases of the cardiovascular system; Atherosclerosis: Etiology and risk factors, Hyperlipidemias; Brief review of Lipoproteins and their metabolism, classification of Hyperlipidemias. Clinical and nutritional aspects of hyperlipidemias. Dietary care. Ischemic Heart Disease; Nutritional management. Congestive heart disease and nutritional management. Hypertension; Etiology, prevalence, nutritional management and prevention. Cerebrovascular disease and diet, Renal Diseases; Review of physiology and function of normal kidney; Diseases of kidney; Classification, etiology, characteristic symptoms and dietary management in: Glomerulonephritis; Acute and chronic, Nephrotic syndrome, renal failure and uremia, acute and chronic renal failure. Dietary management in renal dialysis and renal transplant. Chronic renal failure in patients with diabetes mellitus and children. Nephrolithiasis. Use of sodium and potassium exchange lists.

**Allergies:** Definition, symptoms, diagnosis and dietary management. Food selection. Food allergy in infancy. Diseases of Musculoskeletal System, Dietary management of rheumatoid arthritis, osteoarthritis, osteoporosis.

**Cancer:** Nutritional and non-nutritional etiological factors, Management of cancer patients in relation to the clinical treatment and cachexia.

**Surgery, trauma and burns:** Physiological changes in relation to trauma. Assessment of the nutritional status in surgical and burns patients. Pre-operative and post-operative nutritional care.

Nutritional care in trauma. Nutritional management of burns patients.

**Inborn errors of metabolism:** Biochemical basis and nutritional management of PKU and Maple Syrup Urine Disease. Metabolic disorders; Dietary care in diseases of the Adrenal Cortex, Thyroid and parathyroid glands. Gout. Interactions between drugs, nutrients and nutritional status (in brief).

### Reference

1. Anderson, L., Dibble, M.V., Turkki, P.R., Mitchall, H.S., and Rynbergin, H.J. (1982): Nutrition in Health and Disease, 17<sup>th</sup> Ed., J.B. Lippincot & Co. Philadelphia.
2. Antia, F.P. (1973): Clinical Dietetics and Nutrition, Second Edition, Oxford University Press, Delhi
3. Mahan, L.K., Arlin, M.T., (1992): Krause's food, Nutrition and Diet Therapy, 8<sup>Th</sup> Ed. W.B. Saunders Company, London.
4. Robinson, C.H., Lawler, M.R., Chenoweth, W.L. and Garwich, A.E. (1986): Normal and Therapeutic Nutrition, 17<sup>th</sup> Ed., Macmillan Publishing Co.
5. Williams, S.R. (1989): Nutrition and Diet Therapy, 6<sup>th</sup> Ed. Times Mirror/Mosby College Publishing, St. Louis.
6. Raheena, Begum (1989): A textbook of foods, nutrition and dietetics. Sterling Publishers, New Delhi.
7. Joshi, S.A.(1992): Nutrition and Dietetics, Tata Mcgraw Hill Publications, New Delhi.

### PRACTICAL

#### HSB607: DIET THERAPY II

(Credit 2)

1. High-Risk Management (hospital based) – Nutrition assessment.
2. Review of existing practices in hospitals. Oral supplements indigenous/home based and commercial for stressed patients – burns, surgery, cancer, debilitated patients. Management of patients with feeding problems. Tube feeds – all forms, elemental and parenteral.
3. Diabetes Mellitus
4. Planning and preparation of diets. Without Insulin, with insulin, adult and juvenile, diabetes in pregnancy, diabetes and illness.
5. Managing, patients with hypoglycemic conditions.
6. Diseases of Cardiovascular system-
7. Formulation of low cholesterol and low sodium recipes, planning and preparation of diets for hypertension, CHD, congestive heart failure during acute, chronic and convalescent conditions. Progressive dietary management for cardiac transplantation and cardiac surgery.
8. Protein and mineral modification for patients with renal disease
9. Planning and preparation of diet for glomerulonephritis – acute and chronic, nephritic syndrome, nephrolithiasis, renal failure – acute and chronic, dialysis.
10. Diet for patients with Neoplasia
11. Elimination diets for allergy.
12. Low purine diet.
13. Standardization of Common food preparations for portion size
14. Planning and preparation of Normal diet.
15. Planning and preparation of fluid food preparations.

16. Clear fluid preparations. Full fluid preparations. Planning and preparation of fluid diet-clear and full fluid.
17. Planning and preparation do Recipes of soft/semi-solid diet,
18. Mechanical, pureed, Planning and Preparation of soft diet.
19. Planning and preparation of recipes using protein concentrates, sugar substitutes, low fat and low calorie recipes, high fibre recipes, bland diet recipes and diets for the following conditions:
20. Overweight and obesity, underweight, fevers, ulcers, diarrhoeas,
21. Constipation, malabsorption syndrome, viral hepatitis, liver
22. Cirrhosis, cholecystitis, nutritional anaemias.

**Paper – III**  
**HSB603: ADVANCED HUMAN DEVELOPMENT**  
**(Credit 3)**

**Child with Special Needs:** Definitions, Terminology, History of studying disability in India & Abroad. Issues in Classification & labelling, Mainstreaming. Education and Rehabilitation facilities. Government & Non-government efforts (Schemes for Physically & Mentally Challenged people). Different Type of disabilities, their definition, classification, statistics, genetic & environmental, causes, prevention, Rehabilitation facilities; Mental Retardation, Sensory Deficits (Auditory Impairment, Visual Impairment), Learning difficulty & disability, Cerebral Palsy & orthopaedic disability, Communication disorders, Behavioural disorders

**Family and Child Welfare:** Family in India (concept, family composition & structure, changing pattern of family, causes & effects of family disharmony, Implications of family changes). Problems & needs of families in specific situations; Families affected by natural calamities, Families affected by war, riots & terrorism, Families with chronically ill patients, Family in extreme poverty conditions, Family with Marital discord, Children's right & National Policy for children, Demographic Profile of child in India. Family & child welfare services working at National & International level (CSWB, ICCW, ICDS, NIFCCD & others, WHO, UNICEF, CARE, ILO & others). Concept, meaning and coping strategies for violence against women, youth, disabled & others, types of violence. Marriage & Family dynamics, Physiological, social, psychological, financial readiness for marriage, Preparation for Marriage; Selecting a suitable partner, Premarital counseling. Technological advancement and family

**Legal Aspects:** Laws regarding marriage (Hindu Marriage Act, Muslim Marriage Act, Christian Marriage Act, Special Marriage Act), Divorce, Adoption, Inheritance Dowry) Contemporary issues in family life, breakup of family, migration, dual career families, non-traditional families, influence of extra familial factors-films, TV, peer group, neighbourhood & school.

**Population & Family life education:** Population statistics of India, Population Policy of India, Meaning, Need, Importance & objective of Population education., Family life education, determination of sex, techniques, fertilization techniques (Amnio centesis, sonography, Gift, IVF &

Pregnancy & its management),, Need & concept of family planning, contraceptive technology, Planned parenthood-spacing between children, size of family, Child Guidance & Counseling, Meaning, nature & scope & objective of child guidance & counselling service. Types of Guidance & Counselling, Educational, Vocational, Occupational, Personal and Behavioural. Assessment Techniques for study of Behaviour, Interests, aptitude, attitude & delayed Development. Family

Support Services, Meaning, Nature & Scope of Family Support Services, Support Services for children (crèches, day care centers, kishore sadan, observation home & Juvenile Jails).

**Support Services for Women:** Mahila Ashram, Nari Niketan, Govt, Praveshalaya & Shriahalya, Vidhwa Ashrams, Women Study Centers. Support Services for elderly ;Old age homes, day care for aged, Support Services for family; Family courts, family guidance centers.

**PRACTICAL**  
**HSB608: ADVANCED HUMAN DEVELOPMENT**  
**(Credit 2)**

1. Visit to various institutions related to special need children.
  - val folky;
  - Deaf and Dumb school
  - Deva Centre
2. Visit to Child Guidance Counselling Centre.
3. Practicing various counseling techniques.
4. Visit to community centres and report writing.
5. Visit to Mahila Ashram, Nair Niketan, Widhwa Ashram, women study centre, Observation Home/Juvenile Jails.

**References :-**

1. Gangrae K.D. (1971), Community Organization in India, Popular Prakashan, New Delhi
2. State of World Children, UNICEF, Annual Publication
3. Parakesh B.S. (1985), Population Education – Inception to Institutionalization, NCERT, New Delhi
4. Bernard H.W. & Fullner D.W., Principles of Guidance, Bombay, Allied Publishers
5. Verma Hildebrand (1985) Guiding Young Children, New York, MacMillan Publishing Company
6. Hallan D.P. & Kauffman T.M. (1991), Introduction to Exceptional Children (5<sup>th</sup> Ed.), Boston, Allyn & Bacon

**Paper – IV**  
**HSB604: CONSUMER PRODUCT, SAFETY AND LEGISLATION**  
**(Credit 3)**

**Type of Products:** Consumer Durables and Non-durables, Consumer Items

**Services:** Types of services available to Consumers like; Transportation, Health, Education, Communication, Gas distribution, Electricity, Supply, Telephones, Etc., Qualitative Assessments of these services, Role of Standards in Consumer Protections; Meaning of Standards Benefit of Standards to Consumers, Benefit of Standards of Manufacturers (Advantages/disadvantages, if any), Product of Certifications, Role of Certifications, Its advantages consumers

**Quality Control and Standardization:** Introduction to Quality Control, Advantages/Disadvantages of Quality Control, Application of Quality Control and standardization for products like (Food, Textiles, Consumer durables, Materials and Consumer items), Identification of hazards and accidents; Features of Product safety Liabilities with reference to consumer items

**Consumer Protections:** Consumer Protection Movements, Importance and Scope of law in consumer protections, Consumer Legislations, Legal Problems in buying and paying for goods and services;

Guarantees, Warrantees, Contracts, Installment sales contract, Approval buying, Cash buying, credit buying, Define, Advantage, Disadvantage of each aspect to consumers), Law Protecting Consumers; Indian Penal Code 1860, Indian Contract Act 1872, Law of Protection of Consumers under the Code of Civil Procedures 1908, The sales of goods act 1930. The agricultural produce (grading + marketing) 1937, Drugs and Cosmetics Act 1940, Drugs and Magic Remedies Act 1954, Prevention of Food Adulteration Act 1954, The Essential Commodities Act 1955, The Protection of Civil Rights Act 1963, The Monopolies and Restrictive trade Practice Act 1969, Protection of Law to Consumer under the Code of Criminal Procedure 1973, Water Prevention and Control of Pollution Act 1974, The Standards of Weights and Measures Act 1976, Preventions of Black Marketing and Maintenance of Supplies of Essential Commodities Act 1980, The Prevention and Control of Pollution Act 1981, The Bureau of Indian Standards Act 1986, The Environment Protection Act 1986, Railway Claim Tribunal Act 1987, Advertising Regulation and Consumer Protection under the Law of Courts 1986, Textile Regulation Act 1988

**Role of different Organizations/Agencies towards Consumers:** Ministry of Law and Justice, Consumer Guidance Society of India, Consumer Co-operatives, Government and Municipal Agencies, Grahak Panchayats

## References

1. Bhatt Gopal, R.(1985): Consumerism Concepts and its need in our era. Indian Journal of Marketing. Vol. 15.
2. Mandam, J. (1974): Indian Market Place, guidelines to consumers education. Brindavan Publishing.
3. Foxall Gordon, R. (1983): Consumer Choice, Macmillan Co., London.
4. Gupta, B.D. (1973): Consumption Pattern in India, Tata McGraw Hill.
5. Publications “Consumer Confrontation”. Consumer Education and Research Centre, Ahmedabad.
6. Publication “Keemal” Consumer Guidance Society.
7. Sherlekar, S.A.: Trade Practices and Consumerism, Himalaya Publication House.
8. The Standards of Weight & Measures Act (1976): 5<sup>th</sup> Edn. 1997. Publisher – Law Publishers (India) Pvt. Ltd.
9. Aggarwal Anju, D. (1989): A Practical handbook for consumers, Bombay, Indian Book House.
10. Bassett, W.H. (1992): Environmental health procedures, 3<sup>rd</sup> edn., London, Chapman & Hall.
11. Mulchandani, N.M. (1992): consumer protection act (No., 68 of 1986) with consumer protection rules (central), 1987 with amendments and case-law upto Oct. 1997.
12. Singh Gurbax (comp) (1990): Law of consumer protection, Jaipur, Bharat law publishers.
13. Food adulteration and how to bear it (1988): London, Unwin Paperbacks.
14. The Essential commodities act 1955 with short notes.
15. Majumdar, Ramanuj, (1993): Product management in India, New Delhi, Prentice Hall of India.
16. Raut, K.C. and Nadi, M.K. (1994): Buying behaviour of consumer durables in India, Delhi, Indian Publishers Distributors.

**Paper – V**  
**HSB605: STATISTICS AND RESEARCH METHODS (Elective)**  
**(Credit 4)**

**Elementary Statistics:** Nature of investigation, scope, objectives. Sources of data, study tools and Techniques of Research, Frequency distributions, Mean, mode, Median, Probability, Standard deviation, Graphs., Research and Documentation, Different types of research and their application, types all data (Primary and Secondary), methods of data collection, classification and organization of data, editing and coding the data, representation of data diagrammatic and graphic presentation, techniques of construction of diagrams and graphs. Techniques of Research Writing

**Seminar- 25 marks**

**Reference**

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