

**HIMALAYAN GARHWAL UNIVERSITY**  
**UTTARAKHAND**



**Evaluation Scheme & Syllabus**

**For**  
**Bachelors of Science – Home Science**  
**(B.Sc. – Home Sc.)**



**HIMALAYAN GARHWAL UNIVERSITY**  
**SYLLABUS FOR THE B.Sc. HOME SCIENCE (FIRST YEAR)**  
**SEMESTER – I**

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Int. Ass	
1.	BHSC101	General English – I	3 hrs.	70	30	100
2.	BHSC 102	Hygiene and Promotive Health	3 Hrs.	70	30	100
3.	BHSC 103	Introduction to Textiles theory +	3 Hrs.	70	30	100
	BHSCP 103	Practical	3 Hrs	100		100
4.	BHSC 104	Food Science theory	3 Hrs.	70	30	100
	BHSCP 104	+ Practical	3 Hrs	100		100
5.	BHSC 105	Introductory Chemistry theory +	3 Hrs.	70	30	100
	BHSCP 105	Practical	3 Hrs	100		100
6.	BHSC 106	Introduction to Human Development	3 Hrs	70	30	100
<b>G. Total</b>						<b>900</b>



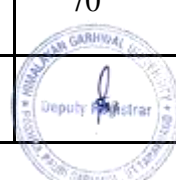
## SYLLABUS FOR THE B.SC. HOME SCIENCE

### SEMESTER - II

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Internal	
1	BHSC 201	Human Physiology	3 Hrs.	70	30	100
2	BHSC 202	Prenatal & Infant Growth and Care	3 Hrs.	70	30	100
3	BHSC 203	Laundry Science and Finishing of Fabrics	3 Hrs.	70	30	100
	BHSCP 203	Practical	3 Hrs.	100		100
4	BHSC 204	Introductory Home Management	3 Hrs.	70	30	100
5	BHSC 205	Basic Nutrition	3 Hrs.	70	30	100
	BHSCP 205	Practical	3 Hrs	100		100
6	BHSC 206	Nutritional Biochemistry	3 Hrs	70	30	100
	BHSCP 206	Practical	3 Hrs	100		100
7	BHSC 207	General English		70	30	100
<b>G.Total</b>						<b>1000</b>



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**B.SC. (HOME SCIENCE)**

**SEMESTER - I**

**Paper 1: BHSC 301- GENERAL ENGLISH -I**

**MM: 70 + 30 = 100**  
**Duration of Exam: 3 hrs.**

**Paper –A: Text**

The following text is prescribed for intensive study

1. Following Poems from The Chronicles of Time edited by Asha Kadyan (Oxford University Press)
  - a) William Shakespeare  
Let Me Not to the Marriage of True Minds
  - b) John Donne  
Death Be Not Proud
  - c) John Milton  
On His Blindness
  - d) Henry Vaughan  
The Retreat
  - e) John Dryden  
Shadwell
  - f) Alexander Pope Know  
Then Thyself
  - g) William Blake  
The Little Black Boy
  - h) William Wordsworth  
Three Years She Grew in Sun and Shower
  - i) Percy Bysshe Shelley  
England in 1819
  - j) Alfred, Lord Tennyson  
Crossing the Bar



**Part-B: General English**

**Unit - I**

**Functional Grammar and Vocabulary:**

Parts of speech, Roots word, Article, Tenses, Active and passive voice, Synonyms, Antonyms, Pair of words, Correction of incorrect sentences, direct and indirect speech.

**Unit - II**

**Writing skills:**

Significance, Essential of Effectiveness writing, Paragraph writing, picture composition/Guided Composition, Notice writing.

**Unit – III**

**Listening skills:**

Meaning and process of listening, importance of listening, difference between hearing and listening, types of listening, barriers to listening skills, methods to improve listening skills, some quick tips for effective listening.

**Unit – IV**

**Speaking:**

Introduction, Importance of public speaking, Methods to improve speaking.

**Unit – V**

**Basics of Communication:**

Definition Process of Communication, Types of communication formal and informal, oral and written, verbal and non verbal, objectives of communication, channels of communication, barriers to communication.

**Paper 2: BHSC 302- HYGIENE AND PROMOTIVE HEALTH**

**MM: 70 + 30 = 100**  
**Duration of Exam: 3 hrs.**

**UNIT -I**

1. Infectious diseases - Causes, symptoms, mode of spread, treatment and prevention.
  - i) Diseases spread through water and food - cholera, diarrhea, hepatitis, and tuberculosis.
  - ii) Diseases spread by insects - Malaria, Dengue
  - iii) Diseases caused by viruses - Polio, measles, chicken pox, cold.
  - iv) Diseases spread by contact and soil - Leprosy, Tetanus.
  - v) Immune Disorders - AIDS.

**UNIT - II**

2. Personal Hygiene - Physical Health - Regular Habits in daily living, eating and eliminating, cleanliness of body and different organs, rest and sleep.
- 3) Mental Health

- 4) Concept of Positive Health.
- 5) Immunity - Definition and types of immunity, vaccination schedule (Triple Vaccine, BCG, Polio drops etc.)
- 6) School Hygiene - medical Inspection of children (Periodic health Check up)  
Public health organization - WHO
- 7) National Health Programmes.  
(Malaria Eradication, Leprosy and Tuberculosis, Pulse Polio).

**References:**

1. Hygiene and preventive medicine - Yashpal Bedi.
2. Home Management and Hygiene - Sweera Relhan, Dinesh Pub.

**Paper 3: BHSC 303- INTRODUCTION TO TEXTILES**

**MM: 70 + 30 = 100**  
**Duration of Exam: 3hrs.**

**Instructions for the examiner :** The examiner will set nine questions in all, selecting four questions from each unit and one compulsory objective type question.

**Instructions for the candidate :** The candidates will attempt five questions in all, selecting two questions from each unit as well as compulsory question.

**UNIT - I**

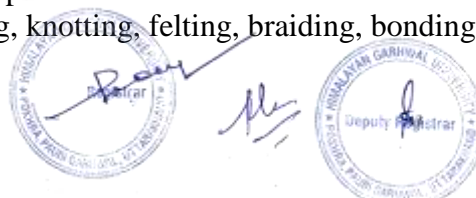
1. Textiles fibres, characteristics, classification.
2. Manufacture, properties and importance to the consumer of the following fibres.
  - a) Natural Plant Fibres - Cotton, Linen
  - b) Natural Animal Fibres - Wool, Silk
  - c) Synthetic Fibres - Rayon, Nylon, Polyester and Acrylic

**UNIT - II**

3. Study of Yarn - Methods of spinning, twist, crimp count and types of yarns.
4. Fabric Construction -
  - a) Weaving - Parts of 300m and its working, plain, twill, satin, sateen weave and their variations.
  - b) Knitting - technology, types of knits
  - c) Other methods - Netting, knotting, felting, braiding, bonding.

**Reference:**

1. Corbman BP (19830) Textiles Fibre to fabric MC Graw Hill, New York.
2. Hollen N & Saddler J Textiles (Latest Edition) Mac Mittan & Co. New York.
3. Joseph M.L. (1976) Essentials of Textiles holt Ripeniart of Winston, New York.
4. Joseph M.L. (1972) Introductory Textiles Science Holt Ripenhart of Winston, New York.



5. Tortore P.G. (1978) Understanding Textiles New York Mac Milan Publishing Inc.
6. Wingate (1976) Textiles Fabrics & their selection. Eagle wood cliffs (New Jeggery) Prentice Hall Ins.
7. Znamieroushi, N (1967) step by step weaving, New York, Western Publishing Co. Inc.
8. Plath Pova (1972) The Craft of Hand Weaving New York. Over Publication Co. Ltd.
9. Murray Rosenary (1981) The Essentials handbook of weaving, London Bell and Hyman Ltd.
10. Terry Brackenbury Knitted clothing Technology Blackwell Science Ltd. London.

### **Practical**

**MM: 100**

**Duration of Exam: 3 hrs**

1. Identification of Textile fibres - cotton, linen wool, silk, nylon using visual inspection microscopic, burning and chemical tests.
2. Identification of weaves and their variations and collection of their samples.
3. Basic stitches of knitting and following of knitting instructions. Making five sample.
4. To estimate the thread count of fabrics.

### **Paper 4 : BHSC 304- FOOD SCIENCE**

**MM: 70 + 30 = 100**

**Duration of Exam: 3hrs**

**Instructions for the examiner :** The examiner will set nine questions in all, selecting four questions from each unit and one compulsory objective type question.

**Instructions for the candidate:** The candidates will attempt five questions in all, selecting two questions from each unit as well as compulsory question.

#### **UNIT - I**

- A. Food - definition, classification and functions.
- B. Basic food groups - composition and nutritional contributions of the following foods: Cereals;Pulses ;Fruits and Vegetables;Milk and Milk Products; Nuts and Oils,Meat; Fish, Poultry and Egg.,Condiments and spices Sugar and Jaggery

#### **UNIT-II**

- A. Cooking:
  1. Definition, objectives and principles of cooking of food.
  2. Different methods of cooking - their advantages and disadvantages.
  3. Effect on nutritive and other values of foods during cooking.
- B. Improving nutritional quality of foods: Germination, Fermentation, Supplementation and Fortification and Enrichment.

### **References:**

1. Srilakshmi, B. (2001) Food Science (2nd edition). New Age International Pvt. Ltd. Publishers : New Delhi.

2. Antia, F.P. (1990) Clinical Dietetics and Nutrition. Oxford Univ. Press : Delhi/Bombay.
3. Rajalakshmi, R. (1990) Applied Nutrition (3rd ed.) Oxford and IBH Pub. Co. Pvt. Ltd. : New Delhi.
4. Swaminathan, M. (1988). Essentials of Food and Nutrition - An Advanced Text Book Vol. I and II. (2nd ed.) BAPPCO : Bangalore.
5. Swaminathan, M. Food Science. BAPPCO : Bangalore.
6. Mudambi, S.R. and Rao S. Fundamentals of Food & Nutrition. (2nd ed.) Wiley Eastern Ltd.: New Delhi.

### Practical

**MM: 100**

**Duration of Exam: 3 hrs**

- A. Controlling Techniques  
Weights and measures, standard and household measures for raw and cooked foods.
- B. Common Cookery Terms and their uses in cooking
- C. Preparation of minimum two items of each of the following  
Sandwiches;Paranthas/Poories – (simple & stuffed);Egg - Boiled, fried and poached  
Rice - Pulao, biryani and sweet rice;Snacks - sweet and salty using different common methods of cooking.  
Preparation of food items by fermentation, germination and supplementation (2 each).  
Raitas .Beverages - Hot and cold.

### Paper 5: BHSC 305 - INTRODUCTORY CHEMISTRY

**MM: 70 + 30 = 100**

**Duration of Exam: 3 hrs.**

#### UNIT – I

Concept of element, mixture and compound. Atomic and Molecular masses. Mole concept and Molar masses, Normality. Molarity and mass percentage. Simple numerical problems based on them.

Subatomic particles: Electrons, Protons and Neutrons, Atomic No., Atomic Weight, Bohr's model of an atom.

Modern Periodic Law and Periodic Table, Electronic configuration of elements (Na, Mg, C, N, O, F, Cl, H). Periodic properties : Atomic size, Ionisation energy, Electron affinity and Electronegativity.

Chemical Bonding : Ionic, Covalent, Coordinate and H-bonding.

Concept of Acids, Bases & Salts, pH and pH Scale Numericals based on pH.

Buffer solutions.

#### UNIT – II

Carbon and its Characteristic : Tetravalency, Catenation, Isomerism, Electronegativity, Tendency to form multiple bonds. Organic compounds, Classification of organic compounds, Functional groups, IUPAC Nomenclature of Aliphatic Compounds (alkanes, alkenes,



alkynes, alcohols, carboxylic acids, aldehydes & ketones). Classification of carbon atoms in alkanes. Soaps and synthetic detergents, advantages and disadvantages.  
Synthetic Polymers: Structure and uses of the following polymers (PVC, Teflon, PAN, Nylon - 6, 6 Polyester).  
Chemical Composition in Cosmetics: Creams, Perfumes, Talcum Powder, Deodorants, Lipsticks, Nailpolish, Shampoo & Hair dye. Paints and Varnishes their composition and uses.

### References :

1. Conceptual chemistry for class XI by S.K. Jain, R. Chand.
2. NCERT Chemistry for class XI & XII.
3. Pradeep's New Course Chemistry Class XI & XII by S.N. Dhawan, Kheterpal & P.N. Kapil.

### Practical

**MM: 100**  
**Duration of Exam: 3 hrs**

1. Preparation of solutions (Normal/Molar). Sodium hydroxide, Sodium Carbonate and Hydrochloric Acid.
2. Preparation of Crystals of Copper Sulphate and Potash Alum.
3. To determine the normality and strength of given Sodium Hydroxide Solution by volumetric titrations using phenolphthalein as an indicator.
4. To determine the normality of the given HCl solution by titrating it against standard Sodium Carbonate solution using methyl orange as an indicator.
5. Qualitative analysis of Chloride, Nitrate, Acetate, Sulphate, phosphate as acid radicals and Lead, Copper, Aluminium, Nickel and Ammonium as basic radicals.
6. Preparation of Soaps, using any two oils (Coconut oil/castor oil).

### Paper 6: BHSC 306- INTRODUCTION TO HUMAN DEVELOPMENT

**MM: 70 + 30 = 100**  
**Duration of Exam: 3hrs**

#### UNIT - I

1. Human Development - Definition of Development, Growth & Human Development.
2. Historical Trends and Early Concepts in the Field of Child Development.
3. Importance and Scope of Human Development.

#### UNIT - II

4. Methods of Child Study - observation, interview, questionnaire, case study, experimental, cross-sectional, longitudinal methods.
5. Principles of development and factors affecting growth and development.
6. Lifespan development through different stages and sub stages, different areas of development.

## References:

1. Hurlock, Elizabeth B. (1987). Developmental Psychology, A life-span approach. Fifth Edition. Tata McGraw Hill Publishing Company Ltd. New Delhi.
2. Hurlock, Elizabeth B. (1987). Child Development Sixth Edition. MC-Graw Hill Book Co. New Delhi.
3. Berk, Laura E (1999). Child Development. Prentice Hall of India, Private Ltd. New Delhi.
4. Papalie, Diane E. (1986). A child's World. Fourth Edition. McGraw Hill Book Company New Delhi.
5. Ambron S.R. (19730) : Child Development, Rinchart Prep, San Francisco.
6. Lerner Hultsch (1983) : Human Development a life span perspective, New York, McGraw Hill Book, Co.
7. Saraswathi, T.S. & Kaur, B. (1993) : The development of Children, New York : Scientific American Books.
8. Gordon, L.J. (19730), Human Development New York: Harper & Row.



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**B.SC. - HOME SCIENCE**  
**SEMESTER-II**  
**Paper 1: BHSC 201- HUMAN PHYSIOLOGY**

**MM 70 + 30 = 100**  
**Duration of Exam: 3 hrs**

**UNIT – I**

- The Cell - Animal cell structure, composition of protoplasm. Cell division - mitosis and meiosis, difference between mitosis and meiosis.
- The Skeleton - Different bones - names and number, Joints of the skeleton - names with examples.
- The Digestive system - Structure and functions of various parts of alimentary canal, digestion in the stomach, digestion and absorption in small intestine and large intestine, Digestive glands- functions of liver, pancreas and salivary glands.
- The circulatory system - Composition and functions of blood, structure and functions of heart, blood pressure.

**UNIT – II**

- The Respiratory system - Respiratory passage - its parts & functions, structure and functions of lungs.
- The Excretory System - Structure and functions of kidneys, mechanism of urine formation.
- The Reproductive System - Structure of reproductive organs in a woman, menstrual cycle.
- The Nervous System - Major parts of the nervous system, structure and functions of brain, spinal cord and nerve cell (Neuron), sense organs - structure of Eye and Ear, Eye defects.

**References:**

1. Chaterzee (1988) Human Physiology, Calcutta, Medical Agency.
2. Pears E.C. (1988) Anatomy and Physiology for nurses - Delhi Oxford University, Press.
3. Clothing Textile and Physiology - Ritu Kapoor Vidaya Publications, Ludhiana.
4. A text book of biology - Dhami & Dhami Pradeep Publications.
5. Elementary biology - K N Bhatia



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**Paper 2: BHSC 202- PRENATAL AND INFANT GROWTH AND CARE**

**MM: 70 + 30 = 100**  
**Duration of Exam: 3hrs**

**UNIT – I**

1. Development during prenatal stage:
  - a) Conception, signs of pregnancy and physiological changes during pregnancy.
  - b) Factors affecting prenatal development.
2. Stages of prenatal development.
  - a) Prenatal growth and activities in first, second and third trimesters of pregnancy.
  - b) The birth process, stages of delivery, types of birth.
  - c) Discomforts and complications of pregnancy.

**UNIT-II**

3. The New Born: Physical characteristics of the neonate - size, weight, body-proportions, sensory capacities i.e. hearing, vision, taste, smell, touch, temperature, reflex actions.
4. Care of the infant (0-2 years)
  - a) Physical, motor, social and emotional development.
  - b) Rearing and care of the infant - feeding, weaning, sleeping, bathing and toilet training.
  - c) Common diseases and immunization during infancy.

**References:**

1. Hurlock, Elizabeth B. (1987). Developmental Psychology, A life-span approach. Fifth Edition. Tata McGraw Hill Publishing Company Ltd. New Delhi.
2. Hurlock, Elizabeth B. (1987). Child Development Sixth Edition. MC-Graw Hill Book Co. New Delhi.
3. Berk, Laura E (1999). Child Development. Prentice Hall of India, Private Ltd. New Delhi.
4. Papalie, Diane E. (1986). A child's World. Fourth Edition. McGraw Hill Book Company New Delhi.
5. Ambron S.R. (19730): Child Development, Rinchart Prep, San Francisco.
6. Lerner Hultsch (1983): Human Development a life span perspective, New York, McGraw Hill Book, Co.



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**Paper 3: BHSC 203 - LAUNDRY SCIENCE & FINISHING OF FABRICS**

**MM: 70 + 30 = 100**  
**Duration of Exam: 3hrs**

**UNIT - I**

1. Introduction to Laundry process; Laundry equipments and their use.
2. Soaps and supplies: Soaps and detergents; Stiffening Agents; Blueing Agents; Bleaching & other laundry reagents; Grease absorbents & solvents.

**UNIT - II**

3. Use and care of fabrics.
4. Stains - classification of stains, methods of removing different types of stains.
5. Fabric Finishing -
  - a) Physical - Singing, napping, brushing, and shearing sizing, tenting & Calendering.
  - b) Chemical - Bleaching, Mercerizing
  - c) Special purpose finishes - Wrinkle resistant, water resistant & repellent, flame retardant.

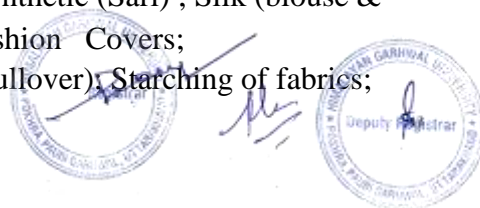
**Reference:**

1. Corbman BP (1983) Textiles Fibre to fabric MC Graw Hill, New York.
2. Hollen N & Saddler J Textiles (Latest Edition) Mac Mittan & Co. New York.
3. Joseph M.L. (1976) Essentials of Textiles holt Ripeniart of Winston, New York.
4. Joseph M.L. (1972) Introductory Textiles Science Holt Ripenhart of Winston, New York.
5. Tortorc P.G. (1978) Understanding Textiles New York Mac Milan Publishing Inc.
6. Gupta Sushma (20030) Text Book of Clothing Textiles and Laundry. Kalyani Publishers New Delhi.
7. Deulkar Durga (1988) Household Textiles and Laundry Work, Atma Ram and Sons. Kashmiri Gate Delhi – 6

**Practical**

**MM: 100**  
**Duration of Exam: 3 hrs**

1. Stain Removal - Removal of any ten stains.
2. Washing & Finishing of : Cotton (Blouse & Sari, Salwar Kameez, Gathers, Frocks, Gents Shirt) ; Synthetic (Sari) ; Silk (blouse & Sari); Embroidered Table Cloth; Cushion Covers; Napkins/Mat ;Woolen Cardigan /Pullover); Starching of fabrics; Cleaning of Fabrics



**Paper 4: BHSC 204 - INTRODUCTORY HOME MANAGEMENT**

**MM: 70 + 30 = 100**  
**Duration of Exam: 3hrs**

**UNIT - I**

- I. Definition, Concept and objectives of home management-
- II. Process of management: Planning, organizing, controlling and evaluating.
- III. a) Family life cycle and stages.
  - b) Qualities and responsibilities of a good home maker.
  - c) Developing managerial abilities/skills.

**UNIT - II**

- IV. Factors motivating management.
  - a) Values - Definition, classification and characteristics.
  - b) Goals - Definition, classification, characteristics and factors affecting goal setting.
  - c) Standards - Definition, meaning and classification.
- V. Decision making: Definition and importance of decision making. Types of decisions, steps in the process for decision making.
- VI. Resources: Meaning and classification of resources. Brief Introduction of human and non-human resources. Common characteristics of resources influencing their management.

**References:**

- 1. Gross, E.H., Crandall, E. and Knall M.M. (1973) Management for Modern Families. Prentice Hall, Inc. Englewood Cliff, New Jersey.
- 2. Nickell, P and Dorsey, JM (1988) Management in Family Living. (4th ed.) Wiley Eastern Ltd. New Delhi.
- 3. Verghese, MA; Ogale, NN and Srinivasan, K. Home Management. Wiley Eastern, New Delhi.

**Paper 5: BHSC 205- BASIC NUTRITION**

**MM: 70 + 30 = 100**  
**Duration of Exam: 3hrs**

**UNIT - I**

- A. Nutrients in food : Definition, functions, sources, recommended dietary allowances, effects of deficiency and excess (in brief) of Carbohydrates, Proteins, Lipids
- B. Water - Functions and sources of water for human body, effects of excess and low intake of water on human body.
- C. Fibre - Types, functions or role of dietary fibre in the human body, sources.

## UNIT-II

- A. Functions, sources, recommended dietary allowances, effects of excess and deficiency (in brief) of: Fat soluble vitamins (A, D, E and K.) and Water soluble vitamins (C, B1, B2, B6, B12 niacin and folic acid).
- B. Functions, Sources, RDA, Effect of Excess and low intake of Macro Minerals (Calcium, Magnesium, Phosphorus, Sodium and Potassium. ) and Micro Minerals (Iron, Iodine and fluorine).

### References:

1. Bamiji, M.S.; Rao, N.P. and Reddy, V. (Editors) (1999) Textbook of Human Nutrition. New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.
2. ICMR (1990) Nutrient Requirements and Recommended Dietary Allowance for Indians. A Report of the Expert Group of ICMR. NIN, Hyderabad.
3. Joshi, S.A. (2002) Nutrition and Dietetics (2nd ed.) New Delhi: Tata Mc Graw Hill Pub. Co. Ltd.
4. Kaushik, V.K. (1998) Readings in Food, Nutrition and Dietetics Vol. I and II. Jaipur Book Enclave.
10. Khanna, K; Gupta, S; Pasi SJ; Seth, R; Mahna, R and Puri, S. (20030) Nutrition and Dietetics. New Delhi: Elite Publishing House.
6. Narsinga Rao BS (1988) Dietary fibre in Indian diets and its nutritional significance. Nutrition Foundation of India Bulletin 9 (4).
7. Robinson CH and Lawler MR (1982) Normal and Therapeutic Nutrition (16th ed) New York : mcMillion Pub. Co. Inc.

### Practical

**MM: 100**

**Duration of Exam: 3 hrs**

- A. Planning, Calculation and Preparation of the following (2 each) 1. Vitamin A, Iron, Calcium and Protein rich snacks.
- B. Preparation of Minimum two items of each of the following: Salads, Soups, Desserts, Cakes, Main Course Dishes.

## Paper 2: BHSC 206- NUTRITIONAL BIOCHEMISTRY

**M.M. 70 + 30 = 100**

**Duration of Exam: 3 Hrs**

### UNIT - I

1. Nutrients in food - Definition, classification, structure, general properties, digestion, absorption and metabolism of Carbohydrates, Proteins, Nucleic acids. Lipids (including iodine number, Acid value and Saponification value).

### UNIT - II

2. Chemistry, physiological importance of Fat soluble vitamins (A, D, E and K. ) and Water soluble vitamins - B1, B2, B6, B12 niacin, folic acid and vitamin C.

3. Biological role of Macro minerals (calcium, magnesium, phosphorus, sodium and potassium.) and .Micro minerals (Iron, iodine, fluorine, zinc, copper, selenium, cobalt.)
4. Enzymes - Definition, chemical nature, classification, importance and factors affecting enzyme activity. Co-factor, co-enzyme.

### References:

1. Pant, M.C. (latest edition): Essentials of Biochemistry, Kedar Nath, Ram Nath & Co.
2. Conn. E.E. & Stumpf P.K. (latest edition)
3. Outlines of Biochemistry, Wiley Eastern Pvt. Ltd.
4. Principles of Biochemistry by J.L. Jain
5. Principles of Biochemistry by Leherninger
6. Practical Biochemistry by David T Plummer

### Practical

**MM: 100**  
**Duration of Exam: 3 hrs**

1. Preparation of solutions of different concentrations and expressing concentrations in different units.
2. Preparation of buffer solution (Acetate buffer-0.2 Molar, pH-30.2).
3. Qualitative analysis of different Carbohydrates, Protein and Lipids
4. Determination of Vitamin C by titrimetric method and fat (demonstration by Soxhlet apparatus). In different food stuff
5. Determination of saponification value and acid value of two different fats or oils.
6. Develop a chromatogram of known amino acids and mixture of amino acids by 2-D paper chromatography.
7. Estimation of chloride in table salt by titrimetric method.

### **Paper 7: BHSC 207- GENERAL ENGLISH - II**

**MM: 70 + 30 = 100**  
**Duration of Exam: 3 hrs**

### Paper –A: Text

The following text is prescribed for intensive study:

1. Following essays from Ideas Aglow edited by Dinesh Kumar and V.B. Abrol
  - a) C.E.M. Joad Our Civilization
  - b) Jyant V. Narlikar It's Question Time
  - c) N.Ram An Interview with Christiaan Barnard
  - d) B.R. Ambedkar Untouchability and the Caste System



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- e) Huck Gutman  
Inhumanisation of War
- f) Amartya Sen  
Seven Types of gender Inequality

**Part-B: General English**

**Unit - I**

**Functional Grammar and Vocabulary:**

Parts of speech, Roots word, Article, Tenses, Active and passive voice, Synonyms, Antonyms, Pair of words, Correction of incorrect sentences, direct and indirect speech.

**Unit - II**

**Writing skills:**

Significance, Essential of Effectiveness writing, Paragraph writing, picture composition/Guided Composition, Notice writing.

**Unit – III**

**Listening skills:**

Meaning and process of listening, importance of listening, difference between hearing and listening, types of listening, barriers to listening skills, methods to improve listening skills, some quick tips for effective listening.

**Unit – IV**

**Speaking:**

Introduction, Importance of public speaking, Methods to improve speaking.

**Unit – V**

**Basics of Communication:**

Definition Process of Communication, Types of communication formal and informal, oral and written, verbal and non verbal, objectives of communication, channels of communication, barriers to communication.



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**B.SC. HOME SCIENCE (SECOND YEAR)****SEMESTER – III**

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Internal	
1.	BHSC 301	Nutrition in Life Cycle	3 hrs.	70	30	100
	BHSCP301	Practical		100		100
2	BHSC 302	Introduction to Clothing Construction	3 hrs	70	30	100
	BHSCP302	Practical		100		100
3.	BHSC 303	Family Dynamics	3 Hrs.	70	30	100
4	BHSC 304	House Hold Equipments & Consumer Protection	3 Hrs.	70	30	100
	BHSCP 304	Practical		100		100
5	305	Community Development & Extension Education-I	3 Hrs.	70	30	100
						800



**SEMESTER - IV**

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Internal	
1.	BHSC 401	Applied & Community Nutrition	3 hrs.	70	30	100
	BHSCP401	Practical	3 hrs	100	-	100
2	BHSC 402	Apparel Designing & Selection	3 hrs.	70	30	100
	BHSCP402	Practical	3 hrs	100	-	100
3	BHSC 403	Childhood and Adolescent Development.	3 Hrs.	70	30	100
	BHSCP403	Practical	3 hrs	100	-	100
4	BHSC 404	Family Resource Management	3 Hrs.	70	30	100
5	BHSC 405	Community Development Extension Education-II	3 hrs	70	30	100
	BHSCP405	Practical	3 hrs	100	-	100
6	BHSC 406	Introductory Physics Practical	3 hrs	70	30	100
	BHSCP406		3 hrs	100	-	100
		<b>Total</b>				<b>1100</b>

**B.SC. II (HOME SCIENCE)  
SEMESTER - III**

**Paper 1: BHSC 301 NUTRITION IN LIFE CYCLE**

**Duration of Exam: 3 hrs.  
MM: 70 + 30 = 100**

**Unit –I**

- A. Basic principles of meal planning and factors affecting meal planning.
- B. Nutrition in infancy, advantages of breast feeding over artificial feeding with reference to nutritional and anti bacterial qualities of human milk only. Formula feeding, Weaning, Supplementary feeding.
- C. Nutrition for preschoolers, school going children and adolescents – requirement for different food groups and nutrients; problems; considerations for planning the diet.

**Unit-II**

- D. Nutrition for adults: Definition of Reference adult man and woman, requirement for different food groups and nutrients; consideration for planning the diet, for sedentary, moderate and heavy male and female worker
- E. Pregnancy and lactation : Physiological changes, problems, requirement for foods and nutrients, and consideration for planning the diet
- F Nutrition during old age: Physiological changes, problems, requirement for foods and nutrients, and consideration for planning the diet

**LAB -**

Foods and Nutrition

Planning, calculation and preparation of diets for various age groups and conditions as mentioned in theory.

**Paper 2: BHSC 302 INTRODUCTION TO CLOTHING CONSTRUCTION**

**MM: 70 + 30 = 100  
Duration of Exam: 3 hrs.**

**UNIT-I**

- Basic Terminology used for clothing e.g. Fiber, Yarn etc.
- Equipments and supplies used in clothing construction, their maintenance, problems faced with specific reference to sewing machine.

- Parts of sewing machine and their functioning
- (a) Defects in sewing machine and how to overcome them.
- (b) Care of sewing machine.
- 

## UNIT-II

- Meaning and importance of clothing
- General principles of clothing construction
- Methods of developing design :-
  1. Drafting - tools required, advantages, and disadvantages of drafting
  2. Paper pattern – terminology, advantages and disadvantages of paper pattern.
- Calculating material for different garments
- Preparation of fabric for garment making, laying out of patterns, cutting & Marking

### Lab-

- Parts of sewing machine and its care
- Use and care of equipments and their supplies used in clothing construction
- Taking body measurements for different types of garments and care to be taken while taking body measurement
- Drafting of basic child's bodice block, sleeve block, *jangia* block.
- Cutting and stitching of simple garments- Napkin, Jhabla, Bib, Jangia

### References:

1. Tanous, Helen Nicol: Designing Dress Patterns, Illinois, Chas A. Bennettco
2. Bane, A./ (1974): Tailoring, Mc graw Hill
3. Bray Nathalie (1978): Dress Pattern Designing, London, Crosby Lockwood and Staples
4. Goldsworthy, M. (1980); Simple dressmaking, London, Mills and Boon Ltd.
5. Goldsworth, M. (1980): Sample Dressmaking, Mills and boon Ltd.
6. Tate and Grissom: Family clothing
7. Sushma Gupta, Neeru Garg and Renu Saini Test book of clothing and textiles and laundry – Kalyani Pub.



### **Paper 3: BHSC 303 FAMILY DYNAMICS**

**Duration of Exam: 3 hrs.**

**MM: 70 + 30 =**

**100**

#### **Unit-I**

- A. (i)Family : meaning, types, functions, stages (ii) Role of family in community
- B. Marriage : Meaning, definition, functions and criteria for mate selection
- C. The changing face of the Indian family, moving from joint to nuclear, single parenting as a consequence of temporary occupation related separation, legal separation, divorce, death and working women.
- D. Influence of national level decisions in human development
  - Child and women's right
  - New economic policy, liberalization
  - Media boom
- E. Specific needs for intervention in the Indian context; reaching out to lower economic groups for community help and caring of aged.

#### **Unit-II**

- F. Family planning-methods, importance and factors affecting it: The effect of industrialization, urbanization, employment of women and socio economic status. Family planning programmes in India.
- G. Demography and population dynamics in developed and developing countries, Indian population policy
- H. Population education - Role of national, international and non governmental agencies. Population statistics with special reference to children and women infant mortality and morbidity.
- I. Reproductive and child health programmes. Reproductive rights of women.

#### **References:**

1. Augustine, J.N. (Ed.) (1982): The Family in Transition ,New Delhi: Vikas publishing House.
2. Coleman,J.C.(1986): Intimate Relationships, Marriage and the Family, Chicago: Macmillan publishing Co.
3. Coser,Rose (1975): The Family: its Structure and Functions,New York: Macmillan Publishing Co.
4. Guppy. G. R. (1976): Family and social Change in Modern India, New Delhi: Vikas Publishing Co.
5. Gore,M.S.(1968): Urbanization and family Change IN India Bombay: popular prakashan.
6. Hutter,Mark (1981): The Changing family :comparative, new York: john Wiley& sons.
7. Srinivasan,K.and Mukerji,S.(Eds) (1987): Dynamics of Population and family

- Welfare ,Bombay: Himalayas publishing House .
8. TISS(1994): Enhancing the Role of the Family as an Agency for Social and Economic Development,Bombay:TISS.
  9. Augustine,J.S.(Ed)(1982): The Indian Family in Transition,NewDelhi:Vikas publishing house,
  10. Chauhan,S.S (1993): Psychology of Adolescence New Delhi:Allied publishers.
  11. Chowdhary,Paul D (1988): Youth Participation and development, New Delhi,Atmaram and sons .
  12. Devadas T.S. (1979): Hindu Family and Marriage, Madras: University of Bombay.
  13. M Desai,K.G.(Ed) (1989): ageing in India ,Bombay:tata Institute of Social Science .
  14. Desai, N.and krishanraj,M.(1987): Women and Society in India ,Delhi: Ajanta publications,
  15. Ehta, P. (1977): The Indian Youth ,Emerging Problem and issues, Bombay: Somalia Publicatio
  16. NIPCCD (1994): Child in India: A Statistical Profile, New Delhi: NIPCCD
  17. Randhawa, M.S. (1991): The Rural and Urban Aged, New Delhi: National Book Organization,
  18. Saraswathi, S. (1991): Youth in India, New Delhi: ICSSR, Govt. of India
  19. Sati, P.N. (1988): Retired and Ageing People, Delhi: Mittal publishers,
  20. Sinha, J.M.P. (1989): Problems of Ageing, New Delhi: Classical Publishing Company.
  21. TISS (1991): Research in Families with Problems in India, Volume I and II. Bombay: TISS.
  22. TISS (1994): Enhancing the Role of Family as Agency for Social and Economic Development, Bombay: TISS.
  23. UNICEF (1945): children and women in India: A Situation Analysis
  24. Veeraraghavan, V. (1987): Rape: Victims of Rape, New Delhi: Northern Book Centre.

**Paper 4: BHSC 304 HOUSE HOLD EQUIPMENT & CONSUMER PROTECTION**

**Duration of Exam: 3 hrs.**

**MM: 70 + 30 = 100**

**Unit - I**

- A. Difference between equipments and tools. Factors affecting requirement of house hold equipments
  - B. Equipments' design and their effect on work and body postures
  - A. Use, care, and storage of household equipments
    - Kitchen tools and equipments
    - Hand operated and electrical equipments
    - Equipments for personal care and recreation C.
- Equipments related to cleaning, washing

**Unit-II**

- D Consumer- Definition, rights, responsibilities and problems E
- Consumer Protection – Laws, standards and agencies.



- F Buying and paying for goods and services
- Cash buying, Credit buying and Approval buying
  - Contracts and Installment sales contract
  - Guarantees
  - Warrantees
  - Legal Problems

### Lab

- 1 List of equipment and tools as mentioned in unit -I
- 2 Use, care and maintenance of tools and equipment as mentioned in unit -I
- 3 Survey to know different brands, comparison of cost, guarantee and after sale service as mentioned in unit -I

## **Paper 5: BHSC 305 - COMMUNITY DEVELOPMENT AND EXTENSION** **EDUCATION - I**

**Duration of Exam: 3hrs.**  
**MM: 70 + 30 =100**

### Unit-I

- A. Social structure and systems:
- Meaning and elements of organization and social structure
  - Social system – its characteristics and relation with social structure
  - Types of society
- B. Analysis of family as a social unit  
Family – its meaning, characteristics, types on the basis of size, marriage, authority and nature of relation.
- C. Communication- meaning, importance, functions and factors influencing effective communication, key elements in the communication process.

### Unit-II

- D. Poverty analysis; Definition, effects of poverty, measurement, causes of poverty, programmes for poverty alleviation
- E. Planning, controlling and evaluation of development programmes for women and children – DWACRA, TRYSEM, ICDS, ANP, SNP, midday meal programme (aim, objective and beneficiaries in brief)
- F. National agencies – NREGA, DRDA, PMRY

### References:

1. Duran, J.(1978): Communication for rural Development ,London ,U.K, British Council.
2. Kuppuswani, B.(1989): Communication and Social Development in India,Bombay, Media Promoters and publisher Private Ltd.
3. Dahama,O.P. and Bhatnager, O.P.(1988): Education and Communication for Development,NewDelhi,Oxford and IBH publishing Co. Pvt. Ltd.





4. Malaviya, seema (1991): Communication for Rural Women, New Delhi, Monak Publications Pvt Ltd.
5. Saunders, Denys (1979): Visual Communications Handbook, U.K., Lutterworth.
6. UNICEF (1975): Communication with Pictures, monograph, Nepal, UNICEF.
7. Mcpherson, A. and Timms, H. (1988): The Audio – Visual Handbook, London, U.K., Pelham Books.
8. Peace Corps (1982): Audio-Visual communications Teaching-Aids-Resoures Pack, USA, Peace Corps Information, Collection and Exchange.
9. Research and reference Division (1984): Ministry of Information and Boardcasting. Mass Media in India, Govt. of India, Publication Division.
10. Srinivasan, Lyra (1945): Tool for Communication Participation – A Manual for Training Trainers In Participatory Techniques, New York, PROWESS/UNDP Technical Series Pack Inc.
11. Reddy, A. (1987): Extension Education, Bapla, Sree Lakshmi Press.
12. Rogers, Alan (1989): Teaching Methods in Extension Education for development, Westwood Row, Tilehurst, READING RG 31, 5LT, England, Woodmans.
13. Upadhyaya, H.C. (1991): Modernization and Rural Development, New Delhi, Anmol Publication.
14. Desai, Vasanth, (1988): Rural Development programme and Strategies- Volumes I to VI, Bombay Himalaya Publication House.
15. Kelbagh, Chetna, (1991): Women and Development, New Delhi, Discovery publishing House.
16. Mohsion Nadeen, (1985): Rural Development through Government Programmes, New Delhi, Mittal Publications.
17. Ghosh Bahanisikha, (1945): The Indian Population Problem, Madras, Sage publication.



**B.SC. III (HOME SCIENCE)**

**SEMESTER - IV**

**Paper 1: BHSC 401 - APPLIED & COMMUNITY NUTRITION**

**Duration of Exam: 3 hrs.**

**MM: 70 + 30 = 100**

**Unit –I**

- A. Assessment of nutritional status of community
  - Dietary
  - Anthropometrics
- B. Major nutritional problems in India, their causes, symptoms and prevention.
  - PEM
  - Anemia
  - Vitamin .A
- C. Microorganisms; types and beneficial and harmful effects on food

**Unit-II**

- D. Food spoilage- causes, general principles of food storage.
- E. Food Preservation- importance for community, principles and methods (drying, dehydration, radiation, canning, preservation by using low and high temperature, salt and sugar and pickling).
- F. Food adulteration; definition, common adulterants in cereals, pulses, milk, ghee and species and their identification

**Lab**

**M.M: 100**

**Duration of Exam: 3 hrs**

- Assessment of nutritional status of one family by using dietary and anthropometric methods
- Preparation of any 30 preserved products
- Preparation of 5 low cost nutritious recipes by using germination, supplementation and fermentation.

## Paper 2: BHSC 402 - APPAREL DESIGNING & SELECTION

**Duration of exam: 3 hrs**

**M.M: 70 +30 = 100**

### **UNIT-I**

- Definition, comparison of the following: -Home made / tailor made / readymade garments
- Meaning and importance of clothing
- Factors affecting selection of clothing for different age groups
- Clothing requirements in different age groups and different physiological conditions.
- Care of clothing  
(a) Mending (b) Renovation (c) Storage

### **UNIT-II**

Aesthetics in Dress: -

- Design -Principles, balance, harmony, rhythm, proportion and emphasis.
- Elements –Color, its dimensions, harmony and effect, its use in relation to Season, occasion, size, figure and complexion.
- Texture analysis and its use in relation to size, figure, occasion, season
- Line and shape analysis and its appropriate use.

### **References:**

1. Tate and Grissom: Family clothing
2. Bray Nathalie (1978): Dress Pattern Designing, London, Crossby Lockwood and Staples
3. Goldsworthy, M. (1980); Simple dressmaking, London, Mills and Boon Ltd.
4. Teery Brackenbury: Knitted Clothing Teachnology,Blackwell Science Ltd.,London.
5. Gupta Sushma (2005) Text Book of Clothing Textiles and Laundry, Kalyani Publishers New Delhi.
6. Sushma Gupta, Neeru Garg and Renu Saini: Text book of Clothing, Taxtile & Laundry, Kalyani Pub.

**Lab**



**M.M: 100**

**Duration of Exam: 3 hrs**

### **A Drafting of sleeves and collars**

- Sleeves: Puff, umbrella raglan, Magyar, leg-o- mutton, ruffle, dolmen, kimono.
- Collars: baby, shawl, sailors, and Chinese band Flat peter pan, raised peter pan,

- cape.
- B Construction of Children Garments (with drafting and layouts):-  
(a) Frock (any one) – A line/ gathered/ party  
(b) Night suit
- C – Drafting Cutting and stitching of Blouse and Petticoat,  
D – Darning – hole, edge and tear  
Patching  
Quilting

**Paper 3: BHSC 403 - CHILDHOOD AND ADOLESCENT DEVELOPMENT**

**Duration of Exam: 3 hrs.**

**MM: 70 + 30 = 100**

**Unit-I**

**A. Physical and Motor Development:**

- Physical and motor development in preschool age, childhood and adolescences it continues through infancy, end of infancy, preschool, childhood, adolescent
- Puberty growth spurt (including primary and secondary sexual characteristics.
- Motor development: reflexes in infancy, major milestones through end of infancy, preschool years, middle and late childhood.

**B. Basic emotional reactions:** (joy, fear, jealousy, anger, sadness, aggression).

Milestones of emotional development through infancy to adolescence.

**C. Cognitive development across the life span:** a brief introduction to Piaget's theory (introduce stages without much elaboration: sensory-motor stage, preoperational, concrete operational and formal operations).

**D. Moral development:** Kohlberg's Stages of Moral development

**Unit-II**

**E. Language Development:** Language as form of communication, pre speech forms of communication ,early vocalization, beginning to use language, one or two word utterances, early sentences, and telegraphic speech.

**F. Play – Meaning, Importance/ Value & types (indoor and outdoor) and theories of play**

**G. Common behaviour problems and their remedies:** - bed wetting, thumb sucking, nail biting, temper tantrums

**H. Socialization:** Meaning of socialization, functions of the family and community in the socialization of the child.

## Lab

**M.M: 100**  
**Duration of Exam: 3 hrs**

1. Observing children in various settings (a) Home setting (b) Preschool setting (c) Out of Home
2. Recording all round development of children below 12 years (physical, motor, social, emotional, cognitive and language development) by using any five following tests / any other equivalent tests or anecdote :
  - General Mental Ability Test for Children.
  - The Parent Child Relationship Scale (PCRD).
  - Emotional Stability Test for Children (ESTC).
  - High School Personality Questionnaire (HSPQ).
  - Adjustment Inventory.
  - Reactions to Frustration Scale (RFS).
  - Children's Approval Seeking Test (CAST).
  - Language Creativity Tests in English and Hindi (LCT).
3. Visit to a day care center for children to study their programmes and functions.
4. Demonstration of activities for new born babies
  - Changing the diaper
  - Baby bath
  - Baby massage
5. Preparation of baby bed sheet, diaper, mobile and two different types of toys for new born babies.

## References:

1. Ambron. S.R. (1975): Child Development, Rinchart press San Francisco.
2. Sinha, D. (1981): Socialization of the Indian Child. New Delhi
3. Rao, P. and Rao, V.N. (1982): Marriage, the family and women in India, New Delhi: Vikas Publications.
4. Augustine, J.N. (Ed.) (1982): The family in transition, New Delhi: Vikas Publishing House
5. Lerner Hultsch (1983): Human Development: a life-span perspective, New York, Mc. Graw Hill Book Co.
6. Coleman, J.C. (1986): Intimate relationships, marriage and the family, Chicago, Macmillan publishing co.
7. Saraswathi, T.S. & Kaur, B. (1993): The development of children. New York: Scientific American books.
8. Cole, M.P. Cole, S. (1993): The development of children. New York: Scientific American books.
9. Gordon, I.J. (1975): Human Development New York: Harper & Row
5. Mussen, P., Conger, J.J. Kagan, J & Huston, A.C. (1945): Child Development and

11. Srivastav, A.K. (1993): Child and adolescent Psychology: seminar readings New Delhi
12. Mangal SK (1988) General Psychology. Sterling Pub. Co New Delhi

**Paper 4: BHSC 404 - FAMILY RESOURCE MANAGEMENT**

**Duration of Exam: 3 hrs.  
MM: 70 + 30 = 100**

**Unit –I**

**Time Management**

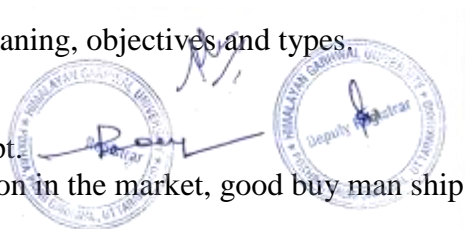
- Time as a resource
- Time demand during various stages of family life cycle
- Characters to consider in making time and utility plan.
- Steps in making daily and weekly time plan
- Control of time plan
- Evaluation of time plan
  
- Relation of energy to the stages of the family life cycle
- Household tasks classified by energy costs
- Types of efforts
- Types of fatigue and the various ways to overcome fatigue
- Management of energy (Planning, Controlling and Evaluating)
- Work simplification
- Techniques of work simplification

**Unit –II**

**Money Management**

- Money as a resource
- Sources of money – wages, salaries, rent, profits, interests, transfer of payment
- Regular and irregular income
- Types of expenditure and factors affecting family expenditure
- Budget – definition and types
- Savings and investments – meaning, objectives, and types

- A. Marketing – definition and concept
- B. Factors affecting consumer decision in the market, good buy man ship.



## References:

1. Consumer Education Series (1992): Safety in House hold Electrical Appliances, CERC Ahmedabad, .
2. Sarkar, A. (1989): Problems of consumers in Modern India, Discovery Publishing House, Delhi
3. Ghosh, A. (1992): The theory of consumer behaviour and welfare in classical paradigm, Bombay: Himalya Publishing House.
4. Agarwal, V.K. (1989): consumer protection in India with special reference to unfair trade practices, New Delhi: Deep and Deep Publishers.
5. Agarwal, Anju, D. (1989): A Practical handbook for Consumers, Bombay, India Book House
6. Singh Gurbax (comp.) (1945): Law of consumer protection, Jaipur: Bharat Law Publishers
7. The Consumer Protection Act 1986 (1987): Bhubaneshwar, Capital Law House.
8. Ruth E. Deacon, francie ;M. Firebaugh (1975): Family Resource Management Principle and application. Roy Houghton, Miffin Company Irma. H. Cross. Elizabeth Crandall, Maryoris M. Knall (1973): Management for
9. modern families, Prentice Hall, Inc. Englewood Cliff, New Jersey
10. Gordon/Lee (1977): Economics for consumers, 7th Edn., D'Van Nostrand Company.
11. Gross. Crandall and Knoli (1980): Management for modern families, 3rd Edn., Prentice ;Hall Inc., New Delhi.
12. Nickell, P. and Dorsey, J. (1986): Management in family living, 4th Edn., Wiley Eastern Ltd., New Delhi.
13. Kewal Krishan Dewey and Adarsh Chand (1981): Modern Economic Theory, 12th Edn. Shyamlal Charitable Trust.
14. Vidya Bhushan Sachdeva (1991): Introduction to Sociology, Kitab Mahal.

## **Paper 5: BHSC 405 - COMMUNITY DEVELOPMENT AND EXTENSION** **EDUCATION -II**



**Duration of Exam: 3hrs.**  
**MM: 70 + 30 =100**

### **Community Development:**

- A. Definition, purpose and goals, process of development
- B. Community development programmes in India, its objectives and critical analysis
- C. Audio visual aids – definition, classification, importance, Use of projected and none projected aids (in brief)

## Unit-II

### Extension Education

- A. Philosophy, principles, objectives, concepts and scope of extension education.
- B. Qualities of a good extension worker
- C. Home-Science- its meaning, history in India, role of Home Scientists in community development.
- D. Programme Planning – meaning, importance and steps.

### Lab

**M.M: 100**

**Duration of Exam: 3 hrs**

1. Field visit to get the field experience of family status (with special reference to women living in village/urban slum area)
2. To see participation of the women in different activities i.e. household, agriculture etc. (Urban and Rural one each)
3. Preparation of various visual aids (leaflet, folders, pamphlets, charts, posters, power point presentation etc) which can be used for educating in villages /urban slum areas (Any three)
4. To plan the educational programmes for uplifting their standard and to educate them by using visual aids

### References:

1. Desrochers, John (1980): Caste in India Today, Bangalore, India, Center for Social Action
2. Thingalaya, N.K. (1986): Rural India – Real India, Bombay, Himalaya Publishing House
3. Alvinso (1990): Social Change and Development, Madras Sage Publications Pvt. Ltd.
4. Subramaniya, K.N. (1988): Economic Development and Planning in India. New Delhi, Deep and Deep publication
5. Desai, Vasant (1990): A Study of Rural Economics- Systems Approach, New Delhi, Himalaya Publishing House
6. Agarwal, A.N. (1994): Indian Economy, Problems of Development and Planning. Madras, Wiley Eastern Ltd.





## Paper 6: BHSC 406 - INTRODUCTORY PHYSICS

**Duration of Exam: 3 hrs.**

**MM: 70 + 30 = 100**

### **Unit-I**

#### **Introduction to properties of matter**

- 1. Properties of Solids:** (a) Density, specific gravity, elasticity, hardness, malleability, ductility.
- 2. Properties of liquids:** Surface Tension, capillary action, Archimedes Principle, Specific gravity of liquids, fluid pressure, Pascal's law and its applications (Hydraulic Lift)
- 3. Properties of gases:** Elasticity, compressibility, Atmospheric Pressure, Simple Barometer, Commercial Barometer.

#### **Mechanics**

- 1. Units and Measurements:** Concepts of measurements and units of length, mass and time in CGS, MKS and British systems and their interrelationship
- 2. Simple machines:** Lever (Definition & Types), Equipment working on the principle of lever (Pulley, Scissors, Egg Beater, Nut Cutter).
- 3. Friction:** Friction Advantages and disadvantages, concepts of ball bearing, sewing floor, scrubbing machines.
- 4. Centripetal and centrifugal forces:** spin dryer in washing machine.

### **Unit- II**

#### **Heat**

- 1. Introduction to heat:** Unit of Heat, Sources and properties of heat, heat and temperature, heat transfer, humidity, relative humidity and dew point.
- 2. Application of heat transfer:** Household thermometers, pressure cooker, vacuum coffee maker.
- 3. Refrigeration:** structure of refrigerator and its working.

#### **Sound**

- 1. Production and propagation of sound:** Wave length, frequency, amplitude phase, velocity of sound in air, solids and liquids.
- 2. Reflection of sound:** Echo, reverberation, sound in auditorium.

#### **Household Electricity**

- 1. Elementary Knowledge of Electricity:** Electric Current (AC & DC), Ohm's Law, Resistance, Sources of electricity (AC Generator & DC Generator, Dry Cell, Thermocouples)
  - 2. Household electric wiring -** Electric meter, household electric wiring and safety features (Fuse, MCB, Earthing).
- Light equipment in the home - incandescent lamp, fluorescent tube lighting, C. F. L,
  - Concept of energy conservation.

## Lab

M.M.: 100

Duration of exam: 3 hrs

### Section (A)

1. To find out the volume of a given cylindrical body using vernier calipers.
2. To find out the diameter of wire using screw gauge.
3. To verify ohm's law
4. To verify law of friction
5. To repair the given heater, iron, cord and fuse
6. Two way lighting circuits.
7. To study variation of surface tension with various factors by capillary rise methods.
8. To compare the insulating efficiency of various materials.

### Section (B) Demonstration of the following equipments :( Any Eight)

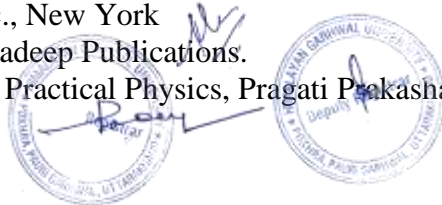
Pressure Cookers, Refrigerator, Mixer, Washing Machine, water Heater, Doorbell, Eggbeater, Nut Cutter, scrubbing machines, incandescent lamp, fluorescent tube lighting, C. F. L

### Section (C) Make any one Project

1. Project on House hold wiring.
2. Project on working of Kaleidoscope.
3. Project on Calculation of electricity bill for an average household for a month.
4. Project on the Use and Care of various household equipments.

### References

1. C.H.Brechner, Household Physics, Norwood Press, USA
2. Peet, L.J. Picket, M.S. and Arnold M.G. (1960) : Household Equipment, John Wiley and Sons inc.
3. Peet, L.J., Picket, M.S. (1975 and (1979) : Household Equipment, 7th and 8th Edn. John Wiley and Sons Inc., New York
4. Fundamental Physics, Pradeep Publications.
5. Gupta and Kumar, 1995, Practical Physics, Pragati Prakashan.



**B.SC. HOME SCIENCE (THIRD YEAR)  
SEMESTER - V**

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Internal	
1.	BHSC 501	Dietetics -I	3 hrs.	70	30	100
	BHSCP501	Practical	3hrs	100		100
2	BHSC 502	Advance Apparel and Textile Designing	3 hrs	70	30	100
	BHSCP502	Practical	3hrs	100		100
3.	BHSC 503	Early childhood Education and children with Special needs.	3 Hrs.	70	30	100
	BHSCP503	Practical	3hrs	100		100
4	BHSC 504	Housing	3 Hrs.	70	30	100
	BHSCP504	Practical	3hrs	100		100
		<b>Total</b>				<b>800</b>

**B.SC. HOME SCIENCE (THIRD YEAR)**  
**SEMESTER - VI**

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Internal	
1.	BHSC 601	Dietetics-II	3 hrs.	70	30	100
	BHSCP601	Practical		100	-	100
2	BHSC 602	Traditional Textiles, Embroideries and consumerism	3 Hrs.	70	30	100
	BHSCP602	Practical		100	-	100
3	BHSC 603	Adult hood Guidance and Counselling	3 Hrs.	70	30	100
	BHSCP603	Practical		100	-	100
4	BHSC 604	Interior Decoration	3 Hrs	70	30	100
	BHSCP604	Practical		100	-	100
5	BHSCP605	Entrepreneurial Techniques in Home Science (optional)				
		Practical		100	-	100
		<b>Total</b>				<b>900</b>

**B.SC. III (HOME SCIENCE)  
SEMESTER - V**

**Paper 1: BHSC 501 -DIETETICS -I**

**Duration of Exam: 3 hrs.**

**Marks: 70**

**Internal Assessment: 30**

**Unit –I**

- A Diet therapy, principles of diet therapy, adaptation of normal diet to light, soft, full fluid, clear fluid and bland diet.
- B Causes, symptoms and dietary modifications of the following:
  - Diarrhoea, constipation, peptic ulcer
  - Fever
- C Dietary modifications in surgical conditions

**Unit-II**

Causes, symptoms and dietary modifications of the following

- Weight imbalance – underweight, overweight, obesity
- Liver disorders – Jaundice, Viral Hepatitis, Cirrhosis and Hepatic Coma.
- Arthritis, Gout

**Lab:**

Planning, calculation and preparation of the diets mentioned in theory.

**Paper 2: BHSC 502 - ADVANCE APPAREL & TEXTILE DESIGNING**

**Duration of exam: 3 hrs**

**Marks: 70**

**Internal Assessment: 30**

**UNIT-I**

- A. Fashion in dress
  - Definition
  - Sources of Fashion cycle
  - Factors favoring and retarding fashion



B. Figure Analysis

- Body proportions
- Figure types
- Selection of design in relation to figure types

C Fitting: Common fitting problems and remedies for fitting defects, reasons for poor fitting.

**UNIT-II**

A. Textiles Designing: - Meaning and importance

B. Designing techniques:

- Dyeing: classification, household dyeing – process, classification and faults in dyeing. Resist dyeing ( tie & dye and Batik) – tools required and methods of producing different effects..
- Printing: Hand printing and machine printing.

**Lab-**

A. Garment Construction

Women's Garments

- Lady's suit (with salwar)
- Churidar Pyajama
- Nightie and Gown (any one)
- 

B. Preparation of sample and one article each of

- Tie and Dye ( samples of various tie and dye techniques also )
- Block printing
- Screen printing
- Stencil Printing
- Batik

**Reference:**

1. Ireland Johan Patrick (1976): Drawing and designing Children's and teenage fashions, London, B.T. Bradford Ltd
2. Ireland John Patrick (1975); Basic Fashion Design, London B.T. Bradford Ltd.
3. Ireland John Patric: Encyclopedia of Fashion details, London, B.T. Bradford Ltd.
4. Patrick John Ireland: Fashion Design illustration, B.T. Batsfond, London
5. Patrick John Ireland: Introduction to Fashion Design, B.T. Batsfond, London
6. Stecker, Pamela: The Fashion design manual, Macmillan, South Yarra, 1996, VIII
7. Doongaji, (1975): Basic Process and Clothing Construction, New Delhi, Raj Book Dep.
8. Lockword, Gillan (1970): Making Clothes for Young children, London Studio Vista.

9. Pandit Savitri (1967): Manual for Children's Clothing, Orient Longman Limited, Bombay.
10. Shenai, V.A (1973) : Chemistry of Dyes and Principles of Dyeing, Ahmedabad, Textile Book Sellers & Publishers.
11. Shenai V.A (1977): Technology of dyeing, Technology of textile processing, vol. 6 Bombay Sevak Pub.
12. Story Joyce (1979): Manual of Dyes and Fabrics, London, Thames & Hudson Ltd.
13. Roshan Alkaji: Costumes of India

**Paper 3: BHSC 503 - EARLY CHILDHOOD EDUCATION AND CHILDREN WITH SPECIAL NEEDS**

**Duration of Exam: 3 hrs.**

**Marks: 70**

**Internal Assessment: 30**

**Unit - I**

- A. Importance, objectives and scope of Early Childhood Education
- B. Early childhood Education centers: Play centers, daycare, Montessori, kindergarten, balwadi, anganwadi etc.
- C. Historical development of nursery school education ( Rousseau , Pestallozi , Froebel , Montessori, Gandhi, Tagore)
- D. Principles of Preschool Programme Planning
- E. Selection of Indoor and Outdoor Equipments

**Unit - II**

- Definition, Types/classification, Causes, Characteristics, Needs, Educational provisions and modification of environment, Attitude of parents, teachers and community for following –

- Gifted
- Mentally Retarded
- Orthopedically Handicapped
- Cerebral Palsy
- Visual Impairment
- Deaf
- Speech Disorders



- Welfare Programmes for children with special needs
- Counseling and therapy for children with special needs

## LAB

- A Methods of child study and report writing on working of anganwadi, montessori, preschool, nursery, balwadi and role of parents (any three)
- Visit to at least 3 nursery schools and submission of reports
  - Visit to a counseling center
  - Report writing based on survey of welfare agencies working for women and children
- B Preparation of creative art activity file, chart, poster, storybook, poem book etc. for normal and special need children (one each)
- C Preparation of baby record, albums and case study of preschool child. Detection and screening of disability in childhood (any two)
- D Case study of a child with special needs – meeting parents/guardians and teachers, assessment of counseling therapy given to child.

## References:

1. Blackie, Pamela (1972): Drama, London: Macmillan education.
2. Contractor, M. (1984): Creative drama and puppetry in education, Delhi: National book trust of India.
3. Garretson, R. (1966): Music in childhood education, New York: Meredith publishing company.
4. Kaul, V. (1991): Early childhood education programme, New Delhi: NCERT
5. Kaul, V., Bhatnagar, R. (1992) : Early childhood education A trainer's handbook, New Delhi: NCERT
6. Devries, R., Kohlberg. L (1987) Programs of early education New York: Longman.
7. Lacer, S., Witherspoon, R., Day, B. (1984): Good Schools for young children, New York: MacMillan publishing company.
8. Murlidharan, R., Asthana, S. (1991): Stimulation activities for young children, New Delhi
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10. Bruke, E (1945): Literature for the young child, Needham Heights: Allyn and Bacon.
11. Krishna Kumar (1986): The child's language and the teacher, New Delhi: UNICEF
12. Kurien, Z (1988): Helping children learn, Bombay: Orient Longman.
13. Leeper. S. wiatherspoon, R. Day B. (1984): Good schools for young children, New York MacMillan



14. Lloyd, I., Richardson, K. (1980): A mathematics activity for early childhood and special education. New York: McMillan publishing company
15. Margelin, E. (1982): Teaching young children at school and home, New York: MacMillan
16. Robinson, H. (1985): Exploring Teaching. London: Allyn and Bacon.
17. Swaminathan. M. (1984): Play activities for young children, New Delhi: UNICEF
18. See Felett: C. (1980): A curriculum for preschools, Columbus: Charles E. Merrill Publishing company
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21. Loring J. & Burn, G. (eds) (1978): Integration of handicapped children in society, London, Routledge & Kegan Paul
22. Narasimhan, M.C. & Mukherjee, A.K. (1986): Disability; a continuing challenge
23. Werner, D. (1994): Disabled Village Children, (Indian edition), Voluntary Health Association of India,
24. Philip, M. & Duckworth, D. (1985): Children with disabilities and their families: a review of research, Windsor, Berks: NFER-NELSON Publishing Co.,
25. Cole, M. & Cole, S. (1993): The development of children. New York Scientific American Books.
26. Kumar, K. (1993): Study of childhood and family. In T.S Saraswathi & B. Kaur (Eds). Human development and family studies in India: An agenda for research and policy New Delhi: Sage.
27. Lerner: R.M. & Hotsch, D.F (1983): Human development :A life-span perspective. New York: McGraw Hill.,
28. Mussen, P.N, Conger, J.J Kagan, J., & Husten, A.C (1945): Child development and personality 7 th ed., N.Y: Harper Collins.
29. Saraswathi, T.S, Verma, A., & Kalra, D (1988) : Issues in child development, Bombay: Somaya.

**Paper 4: BHSC 504 - HOUSING**



**Duration of Exam: 3 hrs.**  
**Marks: 70**  
**Internal Assessment: 30**

**Unit-I**

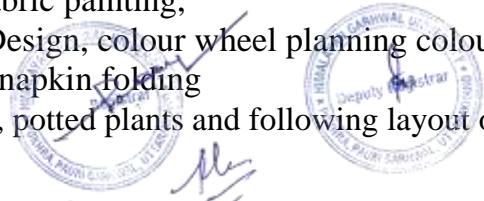
- A. Housing needs of the family, owning versus renting.
- B. Selection of site, factors affecting selection and purchase of site.
- C. Selection of materials for construction of house.
- D. Arrangement of funds for housing-Finance Corporations, Cooperative housing societies, LIC, cooperative banks, loans from different agencies.

## Unit-II

- A. House plans- Signs used for reading house plans
- B. Space planning for: different income groups and for different rooms, passages and staircases keeping into account the following:
- Orientation
  - Activity
  - Privacy
  - Spaciousness
  - Aesthetics
  - Economy
  - Light
  - Ventilation
  - Flexibility.
- C International and national agencies – FAO, WHO, UNICEF, UNESCO, ICMR, NIN, ICAR, CSIR, CFTRI, (aim, objective and beneficiaries in brief)

### Lab –I

- A. Preparation of house plans for different income groups (one each)
- B. Layout of furniture and furnishing costs for different rooms/areas.
- C. *Alpana* and *rangoli*.
- D. Creating various art pieces/accessories using various types of materials and techniques like paper cutting, collage, candle making, , paper mashie, macramé, poster making , fabric painting,
- E. Development & Design, colour wheel planning colour scheme for different room
- F. Table setting and napkin folding
- G. Ornamental plants, potted plants and following layout of lawn and kitchen garde



**B.SC. III (HOME SCIENCE)  
SEMESTER - VI**

**Paper 1: BHSC 601 DIETETICS -II**

**Duration of Exam: 3 hrs.  
Marks: 70  
Internal Assessment: 30**

**Unit-I**

Causes, symptoms, dietary modifications, prevention and nutritional management in following:

- Diabetes Mellitus- IDDM, NIDDM
- Hypertension
- Heart Diseases – Coronary Heart Disease, Ischemic Heart Disease

**Unit-II**

- Dietary management and diagnosis of cancer Causes, symptoms and dietary modification in following:
- Acute and Chronic renal failure
- Nephritis
- Kidney stones

**Lab**

**M. Marks: 100  
Duration of Exam: 3 hrs**

Planning, calculation and preparation of the diets as mentioned in theory.

**Paper 2: BHSC 602 TRADITIONAL TEXTILES & EMBROIDERIES AND  
CONSUMERISM**

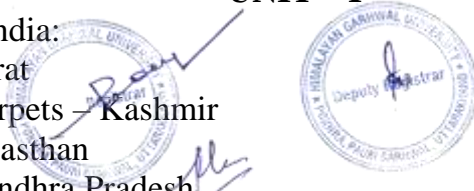
**Duration of exam: 3 hrs  
M. Marks: 70  
Internal Assessment: 30**

**UNIT – I**

Traditional textiles of India:

- Patolas – Gujarat
- Shawls and Carpets – Kashmir
- Bandhini – Rajasthan
- Kalamkari – Andhra Pradesh
- Mulmul, jamdani, amroo, himroo, mushroom
- Brocades of Banaras

Traditional Embroideries of India:



- Kantha – Bengal
- Phulkari – Punjab
- Chikenkari/chickenwork, – UP
- Chamba – Himachal
- Embroidery – Gujrat
- Kasida – Bihar
- Kasuti
- manipuri

## UNIT – II

### Consumer and textile market

- What influences the consumption of textiles
- How may labeling aid the consumer in intelligent selection of textiles/clothing
- How do special finishes enhance the value of fabrics

### Dry cleaning for care of clothing

### How to select fabrics for the following:

- Bed linens
- Blankets
- Table linens
- Towels
- Carpets and rugs
- Draperies

### Lab

**M. Marks: 100**

**Duration of Exam: 3 hrs**

#### A. Preparation of samples of traditional embroideries:

- Kantha – Bengal
- Phulkari – Punjab
- Chikenkari/chickenwork, – UP
- Chamba – Himachal
- Gujrat Embroidery
- Kasida – Bihar
- Kasuti
- manipuri

#### B Preparation of two article using any of the above traditional embroidery method.

#### C Garment Construction – Pyjama, Bushirt with yoke and collar

### Reference:

1. Creative Embroidery designs, Ondorisha Publications
2. Gurey. G.S. : Indian Costumes. The popular Book Dept. Mumbai
3. Tanous, Helen Nicol: Designing Dress Patterns, Illinois, Chas A. Bennettco.
4. Cockett,B.R(1964): Dyeing & Priting, London ,Sir Issac Pitman &sons Ltd.
5. Grossicki,Watson's (1975): Textile Design and colour, Butterworth & Company.

6. Pandit Savitri and Patel Saroj (1970) : Tie and Dye Batik techniques for all , Baroda, Faculty of home science.
7. Chattopadhyay, Kamaladevi (1975): Handicrafts of India, New Delhi, Indian Council of Cultural Relations
8. Dongerkery, S. (1951): The Romance of Indian Embroidery, Bombay, Thacker Co.
9. Znamieroushi,N.(1967): Step by Step Weaving,New York, Western Publishing Co. Inc.
30. Plath Iona (1972):The Craff of Hand Weaving, New York Over publication Co. Ltd.
11. Hess: Textile fibers

**Paper 3: BHSC 603 ADULTHOOD GUIDANCE AND COUNSELING**

**Duration of Exam: 3 hrs.**

**Marks: 70**

**Internal Assessment: 30**

**Unit - I**

A . Young Adulthood

- Developmental Tasks
- Physical Development
- Social and vocational Development
- Mate selection and marital adjustment
- Parenthood

B. Middle Adulthood

- Developmental Tasks
- Physical Development
- Social and vocational Development
- Mid Life crisis
- Menopause in

women C . Late Adulthood

- Developmental Tasks
- Physical Development
- Retirement
- Grandparenthood
- Health and Disease

D. Old Age

- Physical changes and health problems
- Problems and Adjustments in old age
- Widowhood
- Death , Dying and bereavement



**Unit - II**

- A . Guidance and counseling: Concepts, need and principles of guidance and conselling.

- B. Objectives of individual and group guidance. Identification, problems, strategies and approaches.
- C. Methods and techniques in counseling children and parents.
- D. Skill and characteristics of effective counselor

**Lab**

**M. Marks: 100**  
**Duration of Exam: 3 hrs**

Adulthood Guidance & Counseling

1. Visit to and report of old age centre/home
2. Visit of counseling center
3. Preparation any four useful creative material which is used during counseling
4. Problems during menopause period, suggestions for coping with early menopause and managing menopause symptoms.

**Paper 4: BHSC 604 INTERIOR DECORATION**

**Duration of Exam: 3 hrs.**  
**Marks: 70**  
**Internal Assessment: 30**

**Unit-I**

- A. Elements of art and principles of design, their application in the interior decoration of the house and objectives of interior decoration.
- B. Color- properties, classification, dimension, color schemes.
- C. Flower arrangements - types, principles and flower arrangements for different areas and occasions.
- D. Table setting- formal and informal

**Unit-II**

- A Lighting-types and decorative lighting, lighting requirements for various activities and areas.
- B Furniture –types, selection, arrangement and care of different types of furniture, cost estimation for different income groups and areas. Selection and arrangement of comfortable furniture used for work, rest, relaxation, and sleep.
- C Furnishings - Wall and floor coverings and soft furnishings.

**Lab**



**M. Marks: 100**  
**Duration of Exam: 3 hrs**

- A. Development of design, color wheel and planning color schemes for different rooms. Application of elements and principles of design in Interior decoration.

- B. Flower arrangement for different rooms and occasions.
- C. Creating various art pieces/accessories using various types of materials and techniques like pottery painting and decoration, , gift wrapping, greeting cards, decorative envelopes and shopping bags, accessories for fashion designing
- D. Use of waste materials for making utility and decorative articles.
- E. Preparation and decoration of different types of pouches and packing for various occasions and festivals.

**Paper 5: BHSC 605 - ENTREPRENEURIAL TECHNIQUES IN HOME SCIENCE (OPTIONAL)**

**Duration of Exam: 3 hrs**  
**Marks: 100**

**Option - I**

**FOOD PROCESSING**

- A. Preparation of ready to serve beverages, jams, jellies, marmalades, murrabbas, pickles, chutneys, squashes, cordials, sauces, toffee; drying, dehydration of fruits and vegetables( any five)
- B. Preparation of concentrates milk and tomato puree
- C. Bakery - preparation of various bakery products e.g. cakes, biscuits, cookies, demonstration of bread, bun and pizza base. (any three)
- D. Calculation of cost and cost control. as well as packaging and sale of the prepared products.
- E. Visit to bakery unit and fruits and vegetable preservation center/industry (2each)

**References:**

1. Sultan,W.J.(1976): Practical baking manual –for students and instructors, AVI Publishing Co.INC,West Port, Connecticut.
2. Matz,S.A(1989): Bakery Tecnology ,packanging nutrition,products development and Quality assurance, Elsevier Science Publisher Ltd.,New York,USA.
3. Malik,R.K.and Dingra ,K.C.(1981): Technology of Bakery products ,Modern Bakery Industries. Small industry research institute, New Delhi, India.
4. Deshpande,V.(1984): Entrepreneurship of small scale food industries,Concept,Growth and management ,Deep and deep publication- D-1/24,Rajouri garden, New delhi.
5. Meredith, G.G.,Nalson,Re ,et,al.(1982); Practice of entrepreneurship ILO Geneva.
6. Rao,T.V.and Parekh,L.U.(1982): Developing Entrepreneurship,A handbook.Learning system.New delhi.
7. Entrepreneurship Development, AHandbook for New Entrepreneurs, Entrepreneurship Development Institute of India.
8. Salunkhe, D.K.(1974) : Storage, processing and Nutritional Quality of fruit and vegetables , CRC press Ohio.

9. Desrosier , N.W. and Des rosier J.N. (1977) : The technology of Food preservation, AVI Pub. Connecticut.
10. Joslyn, M.A. and Heid, J.L. (1964): Food processing operations, their management, machines, materials and methods, AVI Pub. Connecticut.

## Option - II

### HANDICRAFTS

- A. Preparation of one article with tie and dye.and dye of any one article.
- B. Carpet weaving – visit to one weaving units.
- C. Embroidery - ethnic and traditional motifs with different color schemes. Embroidery techniques suitable for different clothing as well as furnishing fabrics and preparation one article of embroidery..
- D. Printing -. Preparation of two articles using batik, stencil and other printing techniques.
- E. Knitting – knowledge of knitting abbreviations, and preparation of one fancy knitting article.
- F. Packaging and sale of at least two items.

### References:

1. Cockett,B.R (1964): Dyeing & Priting, London ,Sir Issac Pitman &sons Ltd.
2. Grossicki,Watson's (1975): Textile Design and colour, Butterworth & Company.
3. Pandit Savitri and Patel Saroj (1970) Tie and Dye Batik techniques for all , Baroda, Faculty of home science.
4. Shenai,V.A (1973) : Chemistry of Dyes and Principles of Dyeing, Ahmedabad, Textile Book Sellers & Publishers.
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6. Story Joyce (1979): Manual of Dyes and Fabrics, London, Thames &Hudson Ltd.
7. Big Book of needles Craft, Odhams Publications.
8. Creative Embroidery designs, Ondorisha Publications.
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11. Znamieroushi,N.(1967): Step by Step Weaving,New York Western Publishing Co. Inc.
12. Plath Iona (1972):The Craff of Hand Weaving, New York Western publication Co. Ltd.
13. Murray Rosemary (1981): The Essential Handbook of Weaving,London Bell and Hyman Ltd.To Motivate the series MacMillan Text for the Industrial, Vocational and Technical Education Textiles-By Andea Wynne 1997,Ist Publication Mac Millan Education Ltd.,London& Basingstoke.
14. Teery Brackenbury:Knitted Clothing Teachnology,Blackwell Science Ltd.,London.



### Option – III

#### MATERIAL DEVELOPMENT FOR CHILDHOOD EDUCATION

- A. Developing play materials suitable for each age group and adjudge the acceptability.( only four play materials)
- B. Painting and graphics - paper cutting and tracing, clay modeling, preparation of stencil for the printing.( two only)
- C. Puppetry - preparation of puppetry, stick, singer, tabletop, rhythm puppets, glove and cock puppets.(any two)
- D. Packaging and Sale of two prepared items after calculating cost.

#### References:

1. Blackie, Pamela (1972): Drama, London: Macmillan education.
2. Contractor, M. (1984): Creative drama and puppetry in education, Delhi: National book trust of India.
3. Garretson, R. (1966): Music in childhood education, New York: Meredith publishing company.
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5. Kaul, V. (1991): Early childhood education programme, New Delhi: NCERT
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14. Leeper,S.Witherspoon,R.Day B.(1984): Good schools for Young Children,New York:MacMillan.
15. Lioyd,I.,Richardon,K.(1980): A mathmatics activity for early childhood and special education, New York:McMillan publishing company.
16. Margelin,E.(1982): Teaching young children at school and home ,New York:McMillan.
17. Robinson,H.(1985): Exploring Teaching, London: Allyn and Bacon.

#### Option - IV

### INTERIOR DECORATION

- A. Development of design and construction of any five under mentioned items:-  
Cushions, curtains, carpets, doormats, rugs and tablemats.
- B. Motifs and their applications in interior decoration (any two)
- C. Use of free hand , scale drawing ,sketching and paper cutting in interior decoration (any two)
- D. Wall paintings, picture frame design and making other wall accessories (any two)
- E. Craft out of fiber, fabrics, coir, bamboo, clay and metal. (any one)
- F. Preparation of decorative articles (3) for different rooms
- G. Packaging and sale of above articles after calculating cost.

#### References:

1. Rutt Anna Hong (1961): Home furnishing,Wiley Eastern Pvt.Ltd.
2. Bhat Pranav and Goenka Shanita (1990): The foundation of art and desing, Bombay: Lakhani Book Depot.
3. Goldstein,H.and Goldstein,V(1967): Art in Everyday life; New Delhi: Oxford and IBH publishing company.

