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**CBCS CURRICULUM OF  
M.A. HOME SCIENCE PROGRAMME**

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FOR POST GRADUATE COURSES UNDER NILAMBER-PITAMBER UNIVERSITY



Implemented from  
Academic Session 2018-2020

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**SEMESTER I****4 Papers**

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**RESEARCH METHODS AND STATISTICS****PAPER 1-FC-1(TH)****Objectives-**

- *To understand the significance of research Methodology in Home Science Research.*
- *To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.*
- *To understand the significance of statistics in Home science research*
- *To understand and apply the appropriate statistical design technique for the measurement scale and design.*

**CONTENT**

1. Social Research — Meaning, Objectives and importance.
2. Scientific Method in Social research — Meaning, stages.
3. Hypothesis- Meaning, Characteristics of a good hypothesis and sources of hypothesis.
4. Research Design: Meaning and purposes
5. Variables - Definition and Types.
6. Sampling Procedure- Meaning, Types, Merits and demerits
7. Data Gathering Instruments
  - (a) Observation
  - (b) Questionnaire
  - (c) Interview; Types, Merits and demerits.
8. Report Writing and Thesis Writing.
9. Introduction, classification, tabulation of data, frequency distribution
10. Measurement of central tendency-mean, median, mode
11. Graphic representation of data
12. Measurement of variation -Range, quartile deviation, average deviation, standard deviation.
13. Correlation-Pearson's product moment method, spearman's rank correlation method.
14. Test of significance — (a) Parametric t - test, analysis of variance (F test),
  - (b) non- parametric — chi-square test

**REFERENCE BOOKS**

- Pauline V. Young. Scientific Social Surveys and research, Prentice -Hall of India Private Limited, New Delhi.
  - SM Mohsin, Research Methods in Behavioural Sciences - Orient Longman.
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## **FOOD SCIENCE AND PUBLIC NUTRITION PAPER 2-CC-1(TH)**

### **Objectives-**

- *To develop an understanding of composition of various food stuffs, nutrients, theoretical knowledge of various food preparations, processing and its applications.*
- *To understand the consequences of nutrition problems in the society and their control.*
- *To be familiar with various approaches to health interventions, program and policies*

### **CONTENT**

1. Introduction to food science, Interrelationship of the nutrients in biological functions and their significance
2. Carbohydrate, fat and protein- structure, composition classifications, properties and daily allowances, denaturation of protein, properties of gel, emulsion and foam,
3. Water- structure and properties, water activity, quality of drinking water.
4. Enzyme — nature and properties, action of enzyme.
5. Structure, composition and effect of heat, preservation techniques, of the followings.
  - Cereal and pulses
  - Milk and milk product
  - Meat, Fish, Egg
  - Beverages-synthetic and natural,
  - Traditional processed products, Jam, Jelly, Squash
  - Fermentation
6. Public Nutrition- concept, relationship between health and nutrition, role of dieticians in health care delivery system.
7. Primary health care of the community, indicators of health and nutrition
8. National Nutrition policies and program - ICDS, Mid-Day Meal, Prophylaxis program (Anaemia, Vit-A Deficiency, Iodine deficiency), intervention programs
9. Major nutritional problems-etiology, prevalence clinical signs, preventive and therapeutic measures in protein energy malnutrition (PEM), nutritional anemia, Rickets, Osteomalacia, beriberi, goiter', Obesity
10. Food Security, Food production, distribution and availability, socio cultural aspects and dietary pattern and their implications on nutrition and health.

**Reference Books**

- B.Srilakshmi, Dieties
  - Mahtab S Bamji, Text Book of Human Nutrition, Oxford Publication, New Delhi
  - Joshi Shubhangini A, Nutrition and dietetics , Tata McGraw Hill Co. Ltd. New Delhi (2002)
  - Swaminathan M., Food And Nutrition, Vol I & Vol II, BAPPCO
  - Mudambi. S R. and Rajagopal M.V., Fundamentals of Foods Nutrition and Diet Therapy, New Age International Publisher, New Delhi
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## EXTENSION EDUCATION AND COMMUNICATION

### PAPER 3-CC-2(TH)

#### Objectives-

- *To enable the students to understand the changing concepts of Extension Education.*
- *To get acquainted with the trends in Extension Approaches and Models.*
- *To identify the Support System for Extension Education*
- *To enable students to understand the concept, structure and organization of different types of communities.*
- *To understand the factors contributing to changes in Community, Community Organization and their mobilization for developmental goals.*

#### CONTENT

- **Conceptual analysis of Extension:**  
Extension: Meaning, Philosophy, Changing concepts, Objectives, Principles, Functions, Components and Dimensions of Extension, Process and Principles of learning in Extension Education. Quality of a good Extension worker, role of leadership in community development
- **Extension Models**  
Technology innovation, Transfer Models, Social Education Model, Empowerment Participation Model and Combination Model.
- **Extension Approaches:**  
Commodity specialized extension of agricultural commodity, Training and visit for Extension Approaches, Participatory Projects, Extension Educational Institutions, Integrated Area, Cluster and Target Approaches.
- **National Extension System**  
Early Extension Efforts, Community Development Programs,- Genesis and growth, objectives, principles,. ICAR Extension Systems, Agricultural Universities, KVK, TTCs, Extension Systems of Ministry of Rural Development. Functioning of Department of Women and Child Development. Non-Government-Organizations (NGOs) - principles, Working of Government-NGOs Collaborations
- **Support Structures and Their Functions**  
Panchayat, Union and DRDA  
Central Social Welfare Board

State Social Welfare Board

National Level Voluntary Agencies like CAPART, KVIC

Local Level Voluntary Agencies

People's Organization at Grassroots: SI-IGs, Elected Panchayats

#### 6. Extension Systems in India and other Countries

India (Extension Activities), Srilanka, Indonesia, Phillipines, USA,

#### 7 Organizations involved in development

Types-Government, corporate and voluntary sector organization

Organizations working for youth, women, children and special need -

Women - National Commission for Women, SEWA, Mahila Samaikhya, Central Social Welfare Board, Bhartiya Gramin Mahila Sangh,

Children: Indian Council of Child Welfare, ICDS, Child Development

Youth: Nehru Yuvak Kendra, YMCA, YWCA

Groups with Special needs- Physically and Mentally-challenged, Aged, Street Children, National Associations for Blind, Spastic Society, Helpage India, SOS Villages

#### 8. Communication system

Types of communication system- concepts, functions and significance

Interpersonal, organizational, public, mass, electronic and visual communication

#### Recommended Books

- Supe, S.V. 1997. An Introduction to Extension Education. 2' Ed. Oxford & IBH Publishing Co. New Delhi.
- Venataiaji, N. (1996). Educational Technology. New Delhi, IBH Publishing Corporations.
- Advi Reddy, Extension Education, Baptata Publications, Baptata.
- Bacon, El 1959. Extension for Extension Workers, GovL Press Trivendrum.
- Choubey, B. K. 1979. Handbook of Extension Education, Jyoti Prakashan, Allahabad.
- Dahama, O.P. 1973. Extension and Rural Welfare, Ram Prasad & Sons, Agra.
- Dahama, OP. and Bhatnagar, O.P. 2005. Education and Communication for Development. Second Edition. Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi.
- Directorate of Extension 1961. Extension Education in Community Development, Ministry of Food & Agriculture, Govt. of India, New Delhi.
- Mishra DCC, (1990), New Directions in Extension training.
- Rudramoorthy, B. 1964. Extension in Planned Social Change, Allied Publishers, Pvt. Ltd, Bombay.
- Saudhu A.S. (1994), Extension Programme Planning, Oxford and IBH Publishing Co. New Delhi.
- Chandra A., Shah, A. and Joshi, Iii. (1989). Fundamentals of teaching Home Science. New Delhi, Sterling Publishes.

**PRACTICAL****PAPER-CC(P)-3****Objectives-**

- *To acquire practical knowledge of preparation of research proposal, data gathering tools, conducting research and analyzing data.*
- *To have practical knowledge of Food Science and Public well-being and Nutrition*
- *To enable students about practical approach of Home Science Extension Education System and Communication.*

**CONTENT****Part A -**

1. Construct a Questionnaire / Schedule as data gathering tool.
2. Plan a research proposal making hypothesis and prepare a report.
3. Calculation of Measure of Central tendency based on data.
4. Graphical representation of data through Bar Diagram, Frequency Polygon, Pie Chart

**Part B**

1. Use of Fermentation technique for preparation of food and recipe.
2. Preparation of food product / recipe through enrichment process.
3. Assessment of nutritional status of children/ pregnant /lactating women.
4. Development and preparation of low cost recipe for the population groups vulnerable to nutritional deficiencies.

**Part C**

1. Preparation and Use of Audio-Visual Aids
  2. Survey of NGOs such as KVK, KVIC, Gram Yuvak Kendras, Mahila Mandal
  3. Investigation of felt need of any beneficiary group and planning a program for them, execution and evaluation of program.
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**SEMESTER II****4 Papers**

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**Total 100 x 4 = 400 Marks****APPLIED PHYSIOLOGY****PAPER-EC(TH)-1****Objectives-**

- To enable students to understand the structures and functions of the various systems and organs in the body.
- To gain deeper knowledge of the physiology of the human body.

**CONTENT**

1. Cell structure and function- transport across cell membrane and intracellular communications.
2. Nervous System- organization of central nervous system, structure and function of brain and spinal cord.
3. Cardio vascular system- structure and function of heart, blood composition, blood clotting, blood pressure and hypertension.
4. Physiology of digestive system- structure of digestive organs and their digestive and absorptive function. Role of liver, pancreas and gall bladder and impact of their dysfunction.
5. Physiology of respiratory system- organ, mechanism of respiration.
6. Reproductive system- structure of male and female reproductive organs, physiological changes during pregnancy, menstrual cycle.
7. Excretory system-structure and function of kidney, electrolyte balance, haemostasis.
8. Endocrine system- endocrine glands-structure and function, disorder of endocrine glands.
9. Immune system-WBC and production of antibodies.

**RECOMMENDED BOOKS-**

1. Ratan Vidya, Handbook of Physiology, (1986) Jaypee Brothers, NewDelhi
2. Ross and Wilson, Foundation of Anatomy and Physiology. (1973), Medical division of Longman Group Ltd.,
3. J.E. Park and K. Park, Park's Textbook of Preventive and Social Medicine, (2009), 20 Edn. Banarsidas Bhanot, Jabalpur 4. Ganong, W.F., Review of Medical Physiology, 21 Edition, McGraw Hill.

## **THEORIES OF HUMAN DEVELOPMENT**

### **PAPER 1- EC (TH)-1**

#### **Objectives-**

- To enable students to understand the need for theories in Human Development.
- To make students understand various theories of Human Development.
- To enable students to understand the practical implications of Theories

#### **CONTENT**

1. Ethological theory of Darwin
2. Freud's psychoanalytic theory
3. Learning theory of Pablov, Skinner
4. Cognitive theory of Piaget
5. Social Learning theory of Bandura
6. Theory of Self-Mead, Kohut
7. Personality Theory of
  - i. Erik Erikson
  - ii. Adler
  - iii. Sheldon

#### **RECOMMENDED BOOKS**

- Crain W., Theories of Development, Concept and Application, (1992) New Jersey, Prentice Hall
- Kakar S., Culture And Psyche-Selected Essays. (1977) Delhi: Oxford University Press
- Kakar S., The Inner World, (1978) Delhi: Oxford University Press
- Ronald A., In Search of Self in India and Japan, (1989), Princeton University Press
- Vasta, R. Six Theorie of Child Development: Revised formulation and Current Issues (1992), Sessica Kingsley Publisher Ltd.

## A. SOCIAL AND PSYCHOLOGICAL ASPECT OF CLOTHING

### PAPER-EC(TH)-1

**Theory: 60 Lectures; Tutorial: 15 Hrs**

#### Objectives:

- *To study the sociological and psychological aspect of clothing on the individual in social situation.*

#### CONTENTS

1. Origin of clothing and reason of wearing -  
Why costumes differ all over the world, material aspects and climate  
Religious influence  
Events of world  
Clothing symbols
2. Socialization and development of the self  
Social norms  
Attitude and value information  
Individuality and conformity  
Personal and group identification
3. Personality theories  
Sigmoid end-defense mechanisms  
Jung  
Murray
4. Component of fashion and fashion design:  
Silhouette, Details, fashion, Colour, fabric, texture, seams, trims  
Fashion Designer, their role in merchandising, fashion forecasting, design development, line presentation.  
Fashion industry, Fashion retail, producer of fashion, dynamics of fashion, fashion terminology, Origin of Fashion, Fashion cycle, fashion adoption theories, factors influencing fashion.,  
Fashion Communication- need, importance, written & visual communication
5. Growth of costumes-  
Terminology, fashion, concepts, its creation and analysis, Mass production of clothing.
6. Elements used in creating design

An overview of elements and principles of design,

Composition- with one element, with more than one element

Colour- its sensitivity and composition in dress.

Harmony- in form of space coverage of design in the dress.

Process of designing, big motif development, geometrical, simplified, naturalized, stylized, abstract and ornamental, big and small motifs, enlargement and reduction, growth of motif, colour consideration and colour harmony.

Source of inspiration of basic design, sketching, painting- nature, religion, mythology, arts and crafts, architecture.

7. Historical textiles of special significance.

Carpets, tapestries, brocades, laces, shawls, resist dyed and ikat fabric, printed and painted fabric.

8. Textile designing through dyeing and printing-

Tie and dye, batik, resist, union and cross dyeing,

Block, Stencil, Screen, roller, resist, discharge, transfer and flock printing

### Recommended Books

- Leonard G. Rubln (1976): The world of Fashion, Publication Canfield Press, San Frnsisco.
  - Thames and Hudson (1994): Fashion Illustration Today, Thames and Hudson Ltd. London.
  - Patrick John Ireland: Fashion Design illustration, B.T Balsford Ltd. London.
  - Kathryn Mckelvey and Janine Munslow (1997): Illustrating Fashion, Blackwell Science Ltd.
  - Max Tilke (1190): Costume Patterns and Designs, Rizzoll, New York.
  - Anne Morrell (1995): The Techniques of Indian Embroidery, B.T Balsford Ltd. London.
  - Prakash, K (1996): Heritage- Traditional Border Collection, The Design Point Publication.
  - Prakash, K (1992): Expressions- Ethnic Indian Textile Designs, Deluxe Packaging
  - Prakash, K (1989): Impressions, Deluxe Packaging.
  - Avis, M. Dry (1961) : The Psychology of Jung, Methuen & Co. London.
  - Horn, Marilyn J. (1968): The Second Skin, Houghton Mifflin Co., USA
  - Flugol, J.C (1950): The psycho-analytical study of the family, The Hagrath Press \* The institute of Psycho-Analysis, London.
  - Richard Wollheim (1985): Freud, Fontana presss, London.
  - Vinconl Brome (1978): Jung, Granada Publishing, London, Toronto Sydney, New York.
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## ADVANCED TEXTILES AND CLOTHING

Theory: 60 Lectures; Tutorial: 15 Hrs

### PAPER 2-CC(TH) 4

#### Objective

- To enable students to understand about polymers, chemistry, production properties of natural and manmade fibres
- To Enable to develop understanding of yarn, fabrics, finishing, dyeing and printing
- To familiarize with clothing construction and care of clothing

#### CONTENT

1. Chemical concept of Textile fibres-
  - Textile Chemistry and its relation to textiles and clothing
  - Polymer, definition, types, Polymerization process, molecular weight, degree of polymerization
  - general structure of fibre, orientation & crystallinity and its effect on fibre properties.
2. Textile fibres - introduction, production/ manufacturing, structure (physical, microscopic and chemical), properties (physical, chemical and mechanical), use, care of
  - i. Cellulosic- cotton, viscose rayon, acetate rayon, cuprammonium and polyosic rayon,
  - ii. Proteinous - wool and silk,
  - iii. Synthetic fibres- polyester, polyamide, poly acrylonitrile, poly olefins
  - iv. Brief account of jute, linen, coir, carbon, glass, polycarbonate, polyurethane, hydrocellulose, felting, degumming, weighting and shrink proofing, Chemical Spinning, Blend composition and properties.
3. Yarn Manufacturing- Principle, mechanical spinning, steps, nomenclature, yarn numbering system, textured yarn technology, Hot and cold drawing, spun yarn, blends and bicomponent yarn.
4. Principle of fabric manufacturing- Basic principle, various fabric construction methods, characteristics of fabric made and machines involved.
  - Weaving- loom, types of loom, part, process, types of weaves
  - Knitting- types, process
  - Nonwovens- types, construction
  - Introduction of Technical Textiles
5. Finishes- purpose and types

Preparatory/ routine finishes- scouring, bleaching, mercerization, texturing, shearing, singeing etc  
Mechanical finishes- calendering, napping, moiering, etc.

Chemical finishes- spill off, wash n wear, parchmentation, durable press, antcrease, etc

Special purpose finishes- flame retardant, water repellent antistatic, soil release, moth proofing etc

6. Dyeing and printing

Dyeing- Scientific basis of dyeing and printing, classification of textile dyes- synthetic and natural, CI number, colour and chemical component of dyes, , dyeing theory and method, dyeing machines, dyeing with different class of dyes. pigments, auxiliaries used in dyeing

Printing- difference from dyeing, Method and techniques of printing, styles of printing-block, roller, screen, stencil, rotary screen, auxiliaries used in printing

7 An overview of Care precaution and storage of garment, principles of washing, washing of different garments, laundry equipment and reagents, water, stain removal

8. Traditional Indian Textiles and Embroideries

9. Clothing construction process and principles, meaning, scope, importance of dress and apparel design, measuring body for various garments, drafting and making paper pattern, fabric preparation for layout, marking and cutting, handling of fabric after cutting, stitching, types of figure in relation to fitting, eradication of common fitting problem.

**Recommended Books**

- Trotman, E.R., (1975) Dyeing and Chemical Technology of Textile Fibers, Charles Griffino Company Ltd., London
  - Hollen, N. and Saddler J., (1968) Textiles, Macmillan publication
  - Gohl, (2005), Textile Science: An Explanation of fiber Properties, CBS Publication
  - Sekhri Seema. (2016), Textbook of Fabric Science: Fundamentals of Finishing, Prentice Hall India
  - Hatch, L. K., (1993), Textile Science, West Publishing Company.
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**ADVANCED STUDY IN HUMAN DEVELOPMENT****PAPER 3 – CC (TH)-5****Theory: 60 Lectures; Tutorial: 15 Hrs****Objectives-**

- To undertake an advanced study of the stages in Human Development with special focus on stages from prenatal development to adolescence.
- To understand the principles and factors influencing human development in these stages

**CONTENTS**

1. Concept of Development
  - i. Growth
  - ii. Development
  - iii. Learning
  - iv. Maturity
  - v. Heredity
  - vi. Environment
  - vii. Pre-natal Period, influencing Factors
2. Birth to 2 Yrs.(Infancy)
  - i. New Born – Physical description, Sensory capacity and reflexes
  - ii. Early Language Development
  - iii. Social Development during infancy
3. 2-6 Yrs. (Early Childhood)
  - i. Physical and motor development
  - ii. Cognitive Development
  - iii. Language Development
  - iv. Emotional Development
  - v. Socialization, play, parenting and culture
4. 7-11 Yrs. (Middle Childhood)
  - i. Physical and Motor Development
  - ii. Cognitive Development
  - iii. Language Development
  - iv. Social Relationship – Peers, Siblings and Parents
  - v. Sense of Industry, Experience of Schooling

5. Adolescence
  - i. The concept of adolescence, developmental task of Adolescence
  - ii. Development of Primary and Secondary sex characters, sex education
  - iii. Family, Peers and friendship
  - iv. Juvenile delinquency, causes and consequences
6. Adulthood
  - i. Introduction, physical continuity and changes
  - ii. Health and Diseases
  - iii. Work and Career
7. Old age
  - i. Introduction and changes during old age
  - ii. Health and Diseases
  - iii. Psycho social Changes

**Recommended Books-**

- Devdas, R.P, and Jaya N., Text Book of Child development, New Delhi, Macmillan Publishing Co. (1996)
  - Hurlock E. B., Child Development, New Delhi, McGraw Hill, (1985)
  - Kuppuswamy, B., Text Book of Child Behaviour and Development, Konark Publication, (1990).
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**PRACTICAL TRAINING AND SKILL DEVELOPMENT****PAPER 4-CC(P)-6****Objectives-**

- To gain practical knowledge and skill of the topics mentioned

**Content –****Part A**

1. Preservation of Fruits using Sugar as media.
2. Preservation of Vegetables using Salt as media.
3. Improving shelf life of perishable food through blanching.
4. Use of drying techniques for preservation.
5. Preparation of bakery products.

**Part B**

1. Plan an organizational set up of Early Childhood Care and Education ( 0-6Year)l center (As per ICDS Model)
  - i. Selection of location and space,
  - ii. Organisational set up
  - iii. Infrastructural requirement
  - iv. Staffing pattern
  - v. Curriculum and routine planning

**Part C**

1. Identification of Textile fiber and blend analysis
  2. Determination of dimensional stability/ shrinkage, GSM, Yarn count of Fabric (light, medium, heavy weight).
  3. Dyeing of cotton, silk and wool.
  4. Analysis of plain weave, repeat and color scheme.
  5. Preparation of sample of traditional embroidery- Kantha, Chikankari, Phoolkari, Sindhi, Kashmiri, and Manipuri
  6. Construction of garment using drafting method - Frock, Skirt& blouse, salwar/ churidar
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**SEMESTER III**

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**4 Papers****Total 100 x 4 = 400 Marks****ECOLOGY AND ENVIRONMENTAL MANAGEMENT****PAPER 1 – CC-7****Objectives:**

1. *To be aware of the holistic ecological approaches to environment*
2. *To be aware of the environmental problem, hazards and risk.*
3. *to understand the aspect of the environmental pollution and waste management.*
4. *To be aware of the aspects of environmental policies, movement and ethics.*

**Content**

1. Fundamentals of environment
  - Environment, definition, scope of environmental studies
  - Life and the environment, Environmental hazards and risks
  - Natural resources- conservation and sustainable development
2. Eco system- Earth, Man and Environment
  - Eco system of world
  - Forest Ecology,
  - Pathways in ecosystem
  - Food Chain, factors affecting changes in ecosystem and environment
3. Population and Environment
  - Carrying Capacity, Limits of population growth
  - Population Growth and natural Resources
  - Land and water as resource and its use
4. Pollution and environment with reference to air, water, soil
  - Source and Effect of pollution,
  - Pollution control
5. Environment and Public Health
  - Environmental pollution and community health
  - Water and air borne diseases
  - Effect of other harmful substance
6. Waste Management
  - Waste, types and Management
  - Solid waste management

7. Environment control measures
  - Environmental control legislation, policies and movement,
  - Human rights issues related to environment
  - Women and Environment
8. Role of Municipality, Government and Non-Governmental Agencies in promoting better health environment

**Recommended Books**

- Basu R.N., (2000) Environment, University of Kolkata
  - Bhatia, H.S. (1998), A Textbook of Environmental Pollution and Control, New Delhi
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## CONSUMER ECONOMICS AND FINANCIAL MANAGEMENT

### PAPER 2-CC-(TH)-8

**Theory: 60 Lectures; Tutorial: 15 Hrs**

#### Objectives

- *To know the conceptual, human and scientific aspect of management function*
- *To develop the ability to evaluate the management efficiency and effectiveness in the family and other organizations*
- *To become aware of aspects of the financial management*
- *To have an overview of the consumer behaviour and the consumer movement*

#### Content

1. Management Institutes in India- Industrial, farm and agricultural, institutional , household and education
2. Management as a system – Definition, elements, types, advantages and limitations of system approach, application in family resource management.
3. Decision making- meaning, types of decision, modes of decision making, Techniques and tools of decision making, cost benefit analysis
4. Management function and Process
  - Planning- objective, principles , policies and strategies
  - Organizing –Purpose, principles, processes delegation authority, responsibility and accountability
  - Staffing, purpose, principles, recruitment, appraisal
  - Guiding, directing, leadership, motivation, communication
  - Controlling and feedback
5. Tax planning, savings and investment
  - Types of Taxes, principles and procedure of income Tax, preparation of statement of income, income tax , filing of income tax and return,
  - Importance of saving components, saving facilities and investments opportunities
  - Role of credit in finance

6. Consumer in Indian Market
  - Consumer, definition, and characteristics of consumer, role of consumers in the economy of a nation
  - Market, meaning, definition, characteristics and types
  - Changing business environment – telemarkets, global, e business and e commerce.
7. Market practices and exploitation of consumer
  - Types of exploitation, causes, adulteration, packaging, labels, weights and measures, advertising and sale gimmicks
  - Consumer problem and solution
8. Consumer behaviour
  - Determinants of consumer behaviour, opinion, leadership, group influence, social class and culture, consumer dissatisfaction
  - Market strategies influencing consumer behaviour
  - Guidelines for wise purchasing practices
9. Consumer protection
  - Role of consumer organization, national, regional and international
  - Role of Government agencies, legislation
  - Empowerment of consumers, consumer protection act.

### **Recommended Books**

- Kapur , S. K. (1996) Professional Management, S. K. Publishers New Delhi
  - Saiyadain M,S. (1988), Homan Resource Management, Tata McGraw Hill, New Delhi.
  - Dayal R. (1996), Dynamics of Human Resource Development Mittal Publication New Delhi
  - Prophalia Et. al. (1997), Financial Management, Function, Planning and Policy, Kanishka Publisher, New Delhi
  - Chandra Prassana, (1993) Financial Mangement, Theory and Practice, Tata McGraw Hill publishing New Delhi
  - Pandey, I.M, (1988), Elements of Financial Management, Vikas Publishishing House, New Delhi
  - Chadha R. (1995) the Emerging Consumer, New Age International Publisher limited, and Wiley Eastern Limited New Delhi
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**PRACTICAL****PAPER 3-CC(P)-9****Objectives-**

- *To gain practical knowledge of the subject*
- *To understand the principles of pattern making through flat pattern*
- **Important**-Practical 1-4 is compulsory for all students irrespective of their elective paper. From rest of the practical course students may select any one group as per their elective paper.

**Content****I. Compulsory**

1. Study of awareness regarding environmental pollution.
2. Study of garbage disposal system.
3. Preparation of family budget for different income group.
4. Evaluation of performance and efficiency of some common consumer durable.

**II. Any one from three groups****Group A (Foods and Nutrition)**

- i. Qualitative test for carbohydrate, Protein and fat
- ii. Analysis of nutritional problem of different segments and age groups through available secondary data
- iii. Plan a module and necessary instructional aid for nutrition education to any nutritionally vulnerable group of the society.
- iv. Planning, preparation and calculation of energy, fat, protein and important vitamin and mineral for low, middle and high income groups,
  - a) Pregnant women
  - b) Lactating women
  - c) Children
  - d) Adolescent girl

**Group B (Human Development)**

1. Counseling of parent-Role play and mock session
2. Conducting home visits and interviewing /talking to parents
3. Arranging workshop for parents.
4. Organising parents education programs based on parents need.
5. Planning of a parent Teacher meeting: Stimulation of meeting/event/ function-planning, evaluation and reporting.
6. Prepare a chart to track parental involvement and participation.

**Group C (Apparel Designing and Construction)**

1. Development of Bodice Block, Sleeve block, Skirt block and Trouser block for children and women
2. Developing paper pattern for different design for women and children garment through drafting, understanding commercial paper pattern.
3. Designing through Flat pattern making -dart manipulation
4. Development of variation in sleeve, collar, sleeve- body combinations
5. Development of variation in necklines, cowls, built-up necklines
6. Development of variations in Placket opening- centre button closing, asymmetrical double breasted.
7. Construction of garments incorporating above features (Women, Children)
8. Creating motifs, designs and patterns for different usage.
9. Creation of design by combining motifs
10. Creating designs for application through blocks, stencils, screens.

**ADVANCED NUTRITIONAL BIOCHEMISTRY****PAPER 4-EC (TH)-2****OBJECTIVES:**

- To understand the mechanism adapted by the human body for regulation of metabolic pathway.
- . To understand the importance of microorganism in food spoilage
- To understand body for regulation of metabolic pathway

**CONTENT**

1. **Carbohydrates**- digestion, absorption and metabolism, glycolysis, glycogenesis gluconeogenesis, citric acid cycle, pentose - phosphate pathway.
2. **Lipids**: Digestion, absorptions & metabolism Beta-oxidation, Biosynthesis of fatty synthesis of unsaturated fatty acids, ketogenesis, cholesterol, phospholipids
3. **Protein**- Digestion, absorption, metabolism Amination, de-amination, transamination Plasma proteins - Nature, properties and functions.
4. **Minerals** Biological role of minerals-Calcium, Phosphorus, Magnesium. Sodium, Potassium, Zinc, Iron, Iodine- bioavailability, their deficiency diseases.
5. **Vitamins** :Vitamin A. Vitamin C, Vitamin B Complex Thiamine, Riboflavin, Niacin- Biological role, bioavailability and their deficiency diseases, antioxidants
6. **Energy Metabolism**- total energy requirements of the body, methods of measuring calorific value of food stuffs. BMR -factors affecting BMR
7. **Hormones**: mechanism and action of hormones; hypo and hyperactivity of the following gland-Thyroid, Parathyroid. Adrenal gland, Pancreas, Pituitary glands.
8. Nutrients and drug interaction.
9. Factors responsible for the growth microorganism in foods- intrinsic and extrinsic parameters, food sanitation.



**RECOMMENDED BOOKS**

- Text Book of human nutrition -ahtab S. Bamji, Oxford and IBTF Publication, Delhi.
- Concept of bio-Chemistry-Dr. A. C. Deb, Books and allied (P) Ltd. Calcutta
- Advanced text book on food and nutrition- Dr. M. Swaminathan, Bangalore
- Food microbiology-William C. Frazier, Tata Mc. Graw Hill, New Delhi.
- Food Hygiene and sanitation S. Roday, fata Mc. Graw Hill Publisher, New Delhi.
- Food Microbiology, New International (P) Ltd. publishers
- James M Jay, Modem Food microbiology, Chapman & Hall Inc, New York.
- William G Frazier, Dennis C. Westhoff, Food Microbiology, Tata MC Gran Hill



## PARENTING IN EARLY CHILDHOOD

### PAPER 4- EC (TH) -2

#### Objectives:

- *To understand the significance of parents role in early childhood*
- *To develop skills to involve parents in early childhood.*
- *To enable students to understand the need for theories in Human Development.*

#### Content

1. Introduction :
  - The task of parenting and the concept of parenting skills.
  - Changing concept of parenthood and childhood.
2. Individual parenting roles :
  - Determinant of Parenting behaviour.
  - Characteristics of the parenting roles.
  - Role of Father
  - Role of Mother
  - Concept of Family.
3. Developmental interaction in early childhood years:
  - Parent role in developing self awareness in children.
  - Family relation and communication.
  - Helping the child to learn to express and control emotions.
  - Helping the children to discover personal capabilities.
  - Establishing routine and showing responsible behaviour.
  - Learning Social role and interaction with other
4. Mental Health :
  - Definition concept and importance of Mental Health.
  - National Mental Health Policy of India.
  - Community mental health need and programme
5. Mental Health in early childhood years.
  - Mental health: need, safety, security, relationship, nutrition and health
  - Behavioural difficulties- aggression, withdrawal problem related to early schooling
  - Intervention work with children, family and teacher

**Recommended Books**

- Kilkarni, S. (1988) Parents Education Perspective and Approaches, Rawat Publication, Jaipur
  - Gopal Krishnan N. Mental Health in You, Popular Prakashan, Mumbai
  - Gupte, (1981), Speaking of child care, everything you wanted to know, 2<sup>nd</sup> Edn. Sterling Publication, NewDelhi.
  - Lidhop, M. (1987) Child Rearing and Psycho-Social Development, Ashish Publication, New Delhi
  - Bigner J. (1979) Parent Child Relation: An Introduction to Parenting, Mc Million Publication, New York
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## **ADVANCED APPAREL CONSTRUCTION PAPER 4-EC-2**

### **Objectives:**

- *To develop skills in pattern making and construction.*
- *To obtain perfect fit and harmony between fabric design and the garment.*
- *To create awareness of quality assurance norms and evaluating quality of apparel.*
- *To impart an in-depth knowledge of style reading, pattern making and garment construction techniques.*

### **CONTENTS**

#### 1. Pattern making

Techniques of pattern making- Drafting, flat pattern and draping.

Principles and application of flat pattern making for different styles, Drafting and its importance.

Understanding Commercial Paper Pattern

#### 2. Handling of different types of fabrics

Estimating fabric for particular design and fabric width

Suitability of fabrics for different design and garment

#### 3. Fitting

Factors affecting a good fit

Common problems encountered and remedies of fitting defects (upper and lower garments)

#### 4. Factors affecting consumption and selection of fabric/clothing for different age groups

Infants, toddlers, pre-school, school going, adolescent boys and girls, Men and women. Clothing for special needs

a. Maternity and lactation

b. Old age

c. Physically challenged

#### 5. Dress analysis

Structural and applied design, variation in fibre, yarn, fabric, construction, embroidery, dyeing, printing and finishes.

In relation to Principles of design, harmony, balance, proportion, rhythm, emphasis and Element of design- line, form, colour, texture.

6. Evaluation of quality of apparel  
Identification of component of apparel - Fibre content, shaping devices, underlying fabrics, pockets, necklines, hem treatment, decorative details, alteration potential  
Standards for evaluating various components.
7. Textiles and clothing industry  
In relation to production, consumption pattern, local employment potential R&D, problems and prospects of cotton, wool, silk, rayon, synthetic industry.  
Handloom industries, readymade garment industry.  
Technical textiles- Clothitech, Sportstech
8. Pattern making, pattern- envelope and guide sheet

### Recommended Books

- Dhake, Spons, (1992): Greenworld Retail Fashion Promotion and Advertising, MacMillan Poublication.
  - Jarnow, J.A Judelle, B. and Gueereiro, M (1981): Inside the Fashion Business, John Wiley & Sons, NY, Toranto, Brisbane.
  - Frings G.S (1982): Fashion from Concept to Consumer, Prentice Hall Inc., Englewood Cliffs, New Jersey.
  - Easey, M (1995) Fashion Marketing, Prentice Hall of India, New Delhi.
  - Majare, S. (1995): The Essence of Marketing, Prentice Hall of India, New Delhi
  - Chuter, A.J (1995: Introduction to Clothing Production Management, Blackwell Science Ltd.
  - Slone, E. And Samples, J.A (1985): Fashion Merchandising- An Introduction, mc Graw Hill Book Company.
  - Pamela C. Stinger, Pattern Drafting for Dressmaking.
  - Armstrong, Pattern Making For Fashion Design
  - Gloello and Berke: Figure Type and Size Ramnge, Fairchild Publication, New Yourk.
  - Grate and Storm: Concepts in Clothing, McGraw Hill Book Co. New York
  - Claire Shaeffers: Fabric Sewing Guide, Chilton Book Company, Radnot, Pennsylvania.
  - Harold Carr and Barbara Lalhan: The Technology of Clothing Manufacture, Oxford BSP Professional Book London,
  - Stampler, Sharp & Donnell: Evaluating Apparel Quality- Fairchild Publication, New York
  - Natalle Bray: Dress Fitting, Blackwell Science Ltd.
  - Margohs Design Your Own Dress Pattern, Double Day And co. Inc. , New York.
  - Hillhouse, M.S and Mansfield, E.A: Dress Design – Draping and Flat Pattern, London,
  - Sheldon Maratha Gene- Design through Draping, USA Burgers Publishing Company.
  - Brackman, helen, L- Theory of Fashion Design, New York, John Wiley and Sons.
  - Strickland, Gertuote- A Tailoring Manual – New York, Macmillan Company.
  - Pepin Harriet – Modern Pattern Design, New York.
  - Fujji, D.: Colour with Style, Graphic sha Publishing Company Ltd.
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**SEMESTER IV**
**4 Papers****Total 100 x 4 = 400 Marks****INDIAN SOCIO ECONOMIC DEVELOPMENT AND STATUS OF WOMEN****PAPER 4-CC 10****Objectives-**

- *To understand socio-economic structure, organisation and problems of rural, urban and tribal areas.*
- *To understand policy development and their impact.*
- *To understand the effort needed for women empowerment.*
- *To know the support system in the country for Women empowerment*

**CONTENT**

1. Indian economy- structure and organisation of rural, urban and tribal areas Land ownership, occupational hierarchy, dependence on agriculture Caste, Class and Institution, Role and status of women Poverty, inequality, unemployment, stagflation Impact of industrialization on urban life, socioeconomic aspect of metropolitan life.
2. Socio Economic changes since independence Economic planning and achievement Growth verses development, development index, PWLI, HDI, CPI ect.  
Rural development,- concepts, objectives, importance and historical overview Tribal development strategies , policies and welfare  
Women and development New economic policy and its impact
3. Status of Women Status- meaning, status of women, a situational analysis, demographic, education, employment, political and health (general, occupational and reproductive), changing scenario
4. Violence against women Dowry, divorce, female foeticide and infanticide, domestic violence, sexual harassment, portrayal of women in mass media, effort for elimination of all forms discrimination
5. Policies and programmes for women's development  
National policy for empowerment of women, policy perspectives, mainstreaming, a gender perspective in the development process, economic empowerment, poverty eradication, micro credit and self help group, women and agriculture, women and industry, support system
6. Social Empowerment Education, health, nutrition, drinking water and sanitation, housing and shelter, environment Legal empowerment, legal literacy on personal and family laws, role of family court and legal aid centers Political empowerment, role of panchayati raj.
7. Support system Role and function of the Department of Women and Child Development, Central Social Welfare Board, State Social Welfare Board, National Commission for Women, Women's Development Corporation

**Recommended Books**

- Rao. R.K., Women and Education, Kalpaz Publications, New Delhi,
- Hazara M L., Women Children and Poverty, Discovery publishing House, New Delhi
- Vivian J. (1991), Media of Mass Communication,
- Ravindran. R.K., (2000) Media and Development Area.

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## **THERAPEUTIC AND CLINICAL NUTRITION**

### **PAPER 2 –EC-(TH) 3**

#### **Objectives :**

- *To be able to recommend and provide appropriate nutritional care for preventive and therapeutic treatment of various diseases.*
- *To know about various diseases and nutritional dietary requirements*
- *To develop knowledge and understanding of nutritional problems and their evaluation*
- *To know the various methods for assessment of health status.*
- *To develop knowledge about the nutritional support for helping the patients*

#### **Content**

1. Etiopathogenesis, clinical features and dietary management of:
  - i. Cardiovascular disease-Hypertension, Hyperlipidemia, atherosclerosis
  - ii. Diabetes Mellitus-insulin dependent and non-insulin dependent
  - iii. Acute and chronic liver disorder-hepatitis, cirrhosis of liver
  - iv. Acute and chronic disease of pancreas - pancreatitis,
  - v. Gastro intestinal disorders- Constipation, diarrhoea, peptic ulcer
  - vi. Renal disease
  - vii. HIV AIDS
  - viii. Cancer
  - ix. Obesity
2. Nutritional problem's of old aged Etiopathogenesis, prevention and nutritional requirements and dietary management to meet nutritional needs
3. Alternative systems for health and fitness - Ayurveda, Vegetarianism, yoga and Meditation
4. Newer trends in delivery of nutrition and health care
5. Dietary counselling - Steps and techniques in dietary counselling, dietary counseling in different diseases.
6. Nutritional Assessment Methods  
Direct Method, Anthropometric, Biochemical, Clinical, Indirect Method- Dietary Survey
7. Nutritional support-Feeding in techniques
8. Common childhood problems, their causes, symptoms, prevention and dietary Management-diarrhoea, constipation, fever, measles, chicken pox
9. Nutritional assessment of hospitalized and outdoor patient assessment of patient on interpretation of personal, clinical, bio-chemical data
10. Nutritional assessment of nutritional status of children by anthropometric measurement & clinical methods.

#### **RECOMMENDED BOOKS**

1. B Srilakshmi, Dietetics New age international publisher, New Delhi.
2. Mudamsi, Rajgopal, Fundamentals of Food nutritional and diet therapy-
3. Food and Nutrition - Dr. M.S. Swaminatha
4. The nutritive value of Foods- M. S. Swarninathan
5. Child nutrition-Niraja Sharma, Murari Lal & Sons, New Delhi



# EARLY CHILDHOOD CARE AND EDUCATION ORGANIZATIONAL SETUP AND ACTIVITIES

## PAPER 2-EC-(TH) 3

### Objectives

- *To gain knowledge and insight regarding principles of early childhood care and education.*
- *To develop the skills and techniques, to plan activities in ECCE centres of different types, to conduct activities in early childhood care and education and to work effectively with parents and community.*

### CONTENTS :

1. Principles of early childhood care and education  
Definition, importance, need and scope of ECCE,  
Objectives of ECCE
2. Historical Perspectives :
  - ECCE in India – Pre Independence Period, Post Independence Period.
  - Contributions of five years Plans to ECCE
  - Kothari Commission.
  - Contribution of the following thinkers to the development of ECCE :  
Rousseau  
Maria Montessori  
M. K. Gandhi  
Tarabai Modak  
Froebel.
3. How Young children learn: Definition of learning and its perspective
  - Elective method of learning and teaching
  - Play and its importance: play and its characteristics, stages and types of play, use of play way method in young children.
4. Contribution of the following agencies/programme to ECCE in India :
  - ICCW
  - IAPE
  - NCERT
  - ICDS
  - UNICEF
  - NCTE
5. Organization of pre-School Centres :
  - Concept of organization and Administration of early childhood Education centres.

- Building and Equipment : Location and site, arrangement of rooms, different types and size of rooms, Playground, storage facilities, selection of different types of outdoor and indoor equipment.
  - Staff/Personal Service Condition and Role : Role and responsibilities, essential qualities of a care giver/teacher, other personal.
  - Record and Report : Types, aim and purpose.
6. Programme Planing : Long term planning, Short Term Planning, Weekly and daily planning. Routine and Schedules.
7. Activities for ECCE :
- Physical and Motor Development : Activities for gross motor development, activities for fine motor development.
  - Art and Craft activities : drawing, painting, modelling, collage, paper work, clay activities
  - Language Development :
  - Goals of Language listening and talking, song, rhymes, puzzles, stories, playing with puppet, free conversation pictures games.
  - Music : Objective of music education, there aspects of music-making, listening and singing, rhymes, songs, role of teachers.
  - Mathematics : Goal of mathematical learning, development of pre-concepts (Small-big, far-near, above-under, light-heavy, more-less.)
  - Science : Activities for the concept of weight, Colour, shapes, touch animal life, plant life and excursion trip.
  - Social Studies : Goal of fostering, Self Concept and respect for others, promoting social studies through celebrations of festivals, roles of teachers.
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## FASHION ILLUSTRATION, DRAPING AND PATTERN GRADING

### PAPER 2- EC (TH)-3

#### Objectives:

- To acquaint with techniques using pencil, pens, markers, brushes, colour, papers,
- To enable students to gain knowledge of fashion design, industry, communication, illustration,
- To enable students to make pattern from sketch or photo-
- To develop and understanding of draping sample pattern of various styles.
- To enable students to understand fundamentals of grading pattern

#### CONTENT

1. Fashion illustration - Understanding the tools, equipments and their appropriate use for sketching, painting and achieving textural effects.
2. Development of pattern with variation (by drafting) One piece dress, two piece dress, dart less dress (incorporating various collars, sleeves, yokes, necklines, pockets, plackets, etc.).
3. Development of draft for men's and ladies block-crotch line garments by drafting draping (Shorts, Bermudas, Trousers).
4. Introduction to Draping and silhouette of the individual and fabrics-woven and knitted.
5. Theoretical aspect of-  
Draping of bodice block and skirt block and their variation.  
Draping of asymmetrical design preparing pattern.
6. Introduction to grading  
Terminology  
Methodology-track and stack method  
Procedure for grading blocks to various sizes

#### Recommended Books

1. Armstrong, Pattern Making For/fashion Design
2. Grate and Storm: Concepts in Clothing, mc GrawHili Book Co. New York
3. BinaAbling, Fashion Sketch Book, Fairchild Publication, New York
4. Patrick John Ireland, Fashion Design Illustration: Men.
5. Natalie Bray: Dress Fitting Published by Blackwell Science Ltd.
6. Margohs Design your Own Dress Pattern Published By Double Day And co. Inc., New York.
7. CrawlornC.A., The art of Fashion draping, fair child publications New York.
8. Pamela C. Stignger, Pattern Drafting for dressmaking.
9. Hillhouse, M.S and Mansfield, E.A: Dress Design - Draping and Flal Pattern, London,
10. Sheldon Maratha Gene- Design through draping, USA Burgers Publishing Company.
11. Strickland, Gertuote- A Tailoring Manual - New York, Macmillan Company.
12. Pepin Harriet - Modern Pattern Design, New York.
13. Fujji, D.: Colour with Style, Graphic sha Publishing Company Ltd.
14. Winfred, A (1990): metric Pattern Cutting for mens wear: Including Unisex Casoal Clothes and Computer-Aided Design, BSP Professinal Books, Oxford.
15. Corklin, P.G (1990): Pattern Grading for Women's Clothes, the Technology of Sizing, BSP Professional Books, Oxford.
16. Aldrich, W (1994): CAD in Clothing and Textiles, Blackwell Science Ltd.
17. Pattern grading for children's /women's/men's clothes technology of sizing. Gerry Coklin, Oxford B.S.P professional Books London.
18. Shledon Maratha Gene- Design Through Daping, USA Burgers Publishing Company.

19. Winfred, A (1990): Metric Pattern Cutting for Men's Wear: Including Unisex Casual Clothes and Computer-Aided Design, BSP Professional Books, Oxford.
  20. Corklin, P.G (1990): Pattern Grading for Women's Clothes: The Technology of Sizing, BSP Professional Books, Oxford.
  21. Gerry Cooklin, Garment Technology for Fashion Designers Blackwell Science Ltd.
  22. Gerry Coklin, Pattern Grading for Children's /Women's/Men's Clothes Technology of Sizing, Oxford B.S.P professional Books London.
  23. Crawler C.A., The art of Fashion Draping, Fair Child Publications, New York
  24. J Anderson Black, MuidgeGariand, A History of Fashion orbis Publishing, Limited, London.
  25. Boucher Francois, A History of Costume in the ewest Thames and Hudson.
  26. R Turner Wilcox, TheDictionalry of Costume B.T Balsford Ltd.
  27. Gerogina O' Hara: The encyclopedia of Fashion, Thames and Hudson.
  28. Gini Stephens Frings: Fashion from concept to consumer, prentice Hall, N. jersey.
  29. Revolution in Fashion: The Kyoto Costume Institute, AbbevitePrese, New York.
  30. Mackelvery Kathryn, Illustrating Fashion Blackwell Science Munslow Janine.
  31. Seaman Jullan, Professional Fashion illustration, B.T. Batsford Ltd London.
  32. Allen Anne Seaman Julian Fashion Drawing the Basic principles, B.T. Batsford Ltd.
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## **PRACTICAL**

### **Paper 3 – EC (P) 4**

#### **CONTENTS**

- Plan and prepare diet for the patient suffering from
    - i. Cardio vascular disease
    - ii. Diabetes
    - iii. Liver and gall bladder disorder
    - iv. Weight imbalance
    - v. Peptic Ulcer
  
  - Plan and prepare diet for children suffering from PEM, Diarrhoea, VILA Deficiency constipation, fever
  - Plan diet for old age.
  - Prepare module for dietary counseling for patient suffering from
    - i. Renal disease
    - ii. HIV AIDS
    - iii. Cancer
-

## **PRACTICAL**

### **Paper 3-EC (P) 4**

#### **CONTENTS**

1. Visit to various centers, which caters to the pre- school stage eg. Day care centre, balwadis, anganwadi, mobile crèche etc.
  2. Preparing teaching material kit and presentation in mock set up-  
Story and their techniques  
Types of puppets and mobiles  
Song booklets and low cost musical instruments  
Painting, games and materials Picture talk and object talk, related materials  
Planning and executing activities in ECCE centres  
Planning programme for safety measures for children at home, school and in the community  
Arranging workshop with children through- art and creative activities,  
Interaction with co-ordinator of a pre-school to understand the administration and functioning
-

**PRACTICAL****Paper 3-EC(P) 4****CONTENTS**

1. Sketching of different action croquis, sketching - basic rendering techniques.
  2. Sketching of Garment and Garment details
 

Necklines and Collars	Sleeve details
Skirts and pants	Blouses, coats and jackets
Drawstring and fastening	Tassels and tucks
Frills, fringes and gather, cowls and cascades	Hemlines and insertions
Lacing, macramé and patchwork	Pleats, quilting and ties
Shirring, smocking and zips	Yokes and underskirts
  3. Developing a line of garments based on theme through sketching.
  4. Designing, preparing pattern, marker making, pattern envelope and guide sheet (front and back of garment).
  5. Development of slopers for shirt variation and its designing,  
Designing, drafting and construction of low and high waist garment  
A-line, flared, circular, pleated, yoked with godet skirt (with Skirt band, separate band, faced waist line)
  6. Incorporation of Placket- fly front opening, zipper in seam.
  7. Incorporation of Placket- Pockets Slashed and inseam
  8. Developing draft for Men's and Women's Garment (crotch line garment- Shorts, Bermuda, Trouser)
  9. Preparing 2 patterns (trouser/short/skirt) with complete set of makings.
  10. Development of pattern with variation (by drafting) – One piece dress, two piece dress, dartless dress ( incorporating various collars, sleeves, yokes, necklines, pockets, plackets, checks, stripes, unidirectional and novelty fabrics etc.).
  11. Designing through Draping: basic draping principles and techniques, developing patterns
  12. Draping of bodies block and Skirt block and their variation (draping of bodice and variations- princess seams, dart manipulation, yokes etc).asymmetrical design and prepare pattern
  13. Construction of upper bodice /garments for women through draping (including all variations).
  14. Introduction to grading track and slack method of children garment.
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**PROJECT / DISSERTATION****PAPER 4-Project/Dissertation****CONTENT**

Topic of investigation/ Project shall be selected from the following any one group chosen as per their area of specialization-

1. Gr. A- Foods and Nutrition,
2. Gr. B- Human Development,
3. Gr. C - Textiles and Clothing,

Evaluation of project would be done out of 100 marks. 100 marks will have two components: 80 marks for the written component of the project and 20 marks for Viva Voce examination jointly conducted by external examiner and the internal supervisor guide.

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