

SYLLABUS OF HOME SCIENCE

DEPARTMENT OF HOME SCIENCE

SYLLABUS

B.Sc. 1st (PREVIOUS) YEAR

GROUP A				MAX. MARKS	MIN. MARKS
PAPER	I	:	FOOD SCIENCE	50	17
PAPER	II	:	ELEMENTS OF ORGANIC CHEMISTRY	50	17
PAPER	III	:	INTRODUCTION TO RESOURCE MANAGEMENT	50	17
GROUP B					
PAPER	IV	:	INTRODUCTION TO TEXTILE SEIENCES	50	17
PAPER	V	:	WORK PHYSIOLOGY AND FIRST AID	50	17
PAPER	VI	:	ELEMENTS OF STATISTICS	50	17
GROUP C					
PAPER	VII	:	COMMUNICATION PROCESS IN DEVELOPMENT	50	17
PAPER	VIII	:	INTRODUCTION TO HUMAN DEVELOPMENT	50	17
PAPER	IX	:	COMPUTER BASICS	50	17
GROUP A				50	17
PRACTICAL GROUP B				50	17
GROUP C				50	17
TOTAL				600	204

Syllabus
B.Sc. Home Science
Part – I
FOOD SCIENCE

Concept and definition of terms Nutrition, Malnutrition and Health

Brief History of Nutritional Science, Scope of Nutrition

Minimal nutritional Requirement and RDA

Formulation of RDA and Dietary Guidelines
(Reference Man and Reference Woman)

Body Composition and changes through the life cycle.

Energy in Human Nutrition – Energy Balance,

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Assessment of Energy Requirements, Deficiency and Excess.

Composition and Importance of following foods.

- Cereals legumes and oil seeds.
- Fruits and Vegetables.
- Milk and milk products.
- Egg, meat, fish and poultry.
- Sugar and fats.
- Coffee, tea, Coco and alcoholic drinks.

Proteins - Assessment of Protein quality (BV, PER, NPU), Digestion and Absorption, factors affecting protein bio-availability including antinutritional factors, Requirements, Deficiency.

Lipids - Digestion and Absorption, Intestinal resynthesis of triglycerides, Types of fatty acids, role and nutritional significance.

Carbohydrates – Digestion and Absorption, Blood glucose and effect of different carbohydrates on blood glucose, Glycemic Index.

Dietary Fibre - Classification, composition, properties and nutritional significance.

Minerals and Trace Elements – Physiological role, bio-availability and requirements, sources, Deficiency and Excess (Calcium, Phosphorus, Magnesium, Iron, Fluoride, Zinc, Selenium, Iodine, Chromium).

Vitamins - Physiological role, bio-availability and requirements, sources, deficiency and excess (Fat Soluble and Water soluble)

**Water - Functions, requirements.
Improving Nutritional Quality of Foods**

- Germination
- Fermentation
- Supplementation
- Substitution
- Fortification and Enrichment

Practicals

Estimating Energy Requirements using Factorial Method

Demonstration of BMR apparatus.

Categorisation of foods as rich, moderate and poor sources

Planning and preparation of dishes rich in :

Energy, protein, fat, fibre, calcium, iron, vitamin A, vitamin C, thiamine, riboflavin, niacin.

Preparation of Fermented, Germinated, Supplemented and fortified food.

References and recommended books :

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- Wilson (1980) : Anatomy and physiology in Health and illness, Edinburgh, Churchill Livingstone.
- Guthrie, A. H. (1986): Introductory Nutrition, 6th Ed., The C.V. Mosby Company.
- Robinson, C. H., Lawler, M.R., Chenoweth, W.L. and Garwick, A.E. (1986) :
Normal and Therapeutic Nutrition, 17th Ed. MacMillan Publishing Co.
- Swaminathan, M. (1985) :
Essentials of Food and Nutrition, Vols. I and II. Ganesh and Co. Madras.
- Gopalan, C. et al., (1991):
Nutritive value of Indian Foods, Indian Council of Medical Research.
- Indian Council of Medical Research (1989) :
Nutrition Requirements and Recommended Dietary Allowances for Indians, New Delhi.
- FAO/WHO/UNU : Technical Report Series, 724(1985) Energy and Protein Requirement, Geneva.
- WHO Technical Reports Series for different Nutrients.

ELEMENTS OF ORGANIC CHEMISTRY

Historical development and importance of organic compounds.

Comparison of organic and inorganic compounds the proportion of atom.

Bonding and electronic structure of compounds amongst themselves and with other elements.

Aliphatic compounds

Hydrocarbons and their sources

Preparation properties and importance of saturated and unsaturated hydrocarbon. Halogen derivatives of hydrocarbons

Alcohols

Others

Aldehydes and ketones

Acids and derivatives and amines.

Lipids

Classification and general properties of fats, oils, soaps, detergents, waxes phospholipids and steroids.

Amino acids and proteins

Amino acids and proteins, classification properties sources, structure and colour reactions of proteins

Elementary study of essential oils perfumes and flavours. A general idea of their preparation characteristics and uses.

Chemical poisons in foods, Toxins naturally present in foods. Natural organic toxins in foods from other sources.

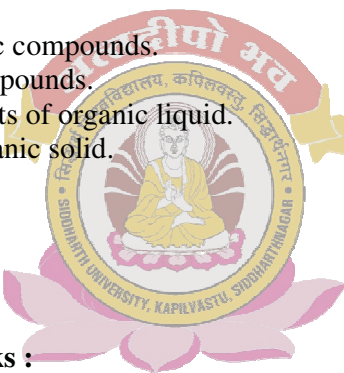
Pesticides – The common pesticides and their judicious use in the home precautions to be observed while using them.

Practicals

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Detection of elements in organic compounds.
Test of elements
Detection of groups in organic compounds.
Test of groups in organic compounds.
Determination of boiling points of organic liquid.
Determination of M.P. of organic solid.
Preparation of soap.
Test of Carbohydrates
Test of amino acids.
Colours reactions of proteins.



References and recommended books :

Joseph, M. Routh; Fundamentals of Inorganic, Organic and Biological Chemistry.

INTRODUCTION TO RESOURCES MANAGEMENT

Introduction to Management

Basic concepts of Management
Similarities and differences in business, farm and family resource management.

Purpose of Management

Management and Change
Achievement of Goals

Obstacles to the Improvement of Management

Lack of Awareness of Management
Lack of Awareness of Resources
Failure of Evaluate Results of Management
Seeking ready-made answer to problems
Lack of information

Family Characteristics Influencing Management

Life Style
Type of family
Family size, Stage of life cycle

Factors Motivation Management

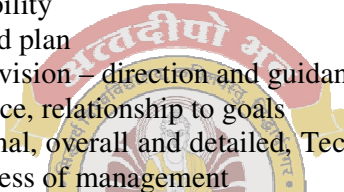
Goals, definition types and utility
Values – Importance, Sources of values, classification, characteristics, changing values
Standards – Definition, Classification – quantitative, Qualitative, Conventional and non-conventional
Decision – Role of decision making in management, resource availability

Management Process

Meaning and elements of process – planning, controlling to plan and evaluating, decision making
Planning – Importance, techniques, types of plan
i. Controlling the plan in action

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- ii. Phases energizing checking Factors in success of the control step, Suitability, Promptness, New Decisions, Flexibility
 - iii. Supervisions of deleted plan
Types of supervision – direction and guidance, Analysis of supervision
 - iv. Evaluation – Importance, relationship to goals
Types – Informal, overall and detailed, Techniques of self – evaluation, Evaluation of the whole process of management

Resources in the Family

Types of resources

Factors affecting the use of resources

Classification of the family on the basis of resources/ income, vocation, activity/profession, quality of human resources in the family, general characteristics of work.

Management of specific Resources

Space, EQUIPMENT, Energy, Community, Resources

Works Simplification

References and recommended books :

1. Tuyh, R. Deacon, Francille M. firebauh (195) :
Family Resource Management – Principle and Application, Roy Houghton Mifflin Company (Unit I, II, IV-VII)
2. Irna, H. Gross, Elizabeth Grandall, Majoris M. Knoll (1973) :
Management Families, Prentice Hall, Inc. Enlgewood Cliffs, New Jersey (Unit I-VIII).

INTRODUCTION TO TEXTILE SCIENCE

Classification of textiles

Introduction to and classification of textiles, terminology in textiles.

History, Composition, types, production, properties and uses – cotton, linen, wool, silk, Rayon, Polyamide, Polyester and Acrylic Fibre.

Study of Yarns

Methods of spinning, making of spinning, making of sewing thread, simple, novelty, metallic and texturised yarns, stretched, core spun, bi and multi component yarns, Characterize yarn numbering system (cotton count, Rennin its – conversion from one to the other).

Weaves

Physical – Singeing, napping, brushing, showing, sizing, shrinking, tendering, calendaring etc.

Chemical – Bleaching, mercerizing etc.

Special purpose finishes – wrinkle, resistant water resistant and repellent, flame retardant, durable press, soil release and resistant, ant pilling, dyeing and painting etc.

Selection of fabrics

Factors influencing selection of fabrics, budget, age, season, occupation, figure, fashion, occasion etc., Principle of clothing construction. Drafting and making paper patterns, taking body measurements for different types of garments. Preparation of fabrics for garments making. Laying

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out of patterns, cutting and marking. Equipment and supplies used in clothing construction, their maintenance, problems faced, remedies with specific reference to sewing machine.

Practicals

Sewing Techniques

Sewing techniques: Basic stitches, seams and seam finishes, fullness, placket, neckline, finishes, fasteners, simple collars, patch pockets and their application to the garments given below.

Garment Construction

Drafting, cutting and stitching of simple garments, such as vest and bib. A-Line Dress and knickers. Bush-shirt and knickers, sun suit/romper, simple frock with yoke.

Identification of textiles Fibers

Visual, microscopic, burning and chemical

Identification of textiles types

Identification of weaves and their variations

Sample collection for weaves and finishes and identification

References and recommended books :

Anna Jacob (1993). Art of Sewing VBS – TD, New Delhi
Benn. A (1974). Tailoring Mc brawl Hill publicity.
Crobman, B.P. (1985). Textile fiber to fabric Mc brawl Hill Publication. NY.
Tortora, P.G. (1998). Understanding Textiles, NY, Mc Millan Publication.

WORK PHYSIOLOGY & FIRST AID

Introduction : Definition and Scope

Types of muscular work

Static and dynamic sources of energy for muscular work : ATP and food energy.

Major systems involved in muscular work and their functions

Musculo-skeletal system, Respiratory system, Circulatory system, Thermo-regulatory system, Nervous system.

Physiological functions modified during muscular work

O₂ Consumption, Energy expenditure, Lactic acid level in blood, pulmonary ventilation, Cardiac output, Stroke, volume and heart rate, Body temperature and rate of perspiration.

Factors influencing Physiological Reactions During Work

Age, Sex, Body build, Posture, Nutrition, Physical fitness Nervous system, Training and adaptation, Intensity and duration of work, Attitude, Climate, Clothing

Evaluation of Physiological workload, and its importance

Energy expenditure and pulse rate technique
Rating of perceived Exertion (RPE)

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Muscular Fatigue

Causes and remedial measures
Importance of rest pause in improving work efficiency

Work Study

Its application in work physiology

First Aid

Practicals

1. Familiarizing with the equipment used in Work Physiology Laboratory.
 2. Measure of cardio-vascular function (heart rate and blood pressure) during static and dynamic muscular work.
 3. Determination of body composition and body build and stature.
 4. Methods of measurement of work output : Direct calorimeter, indirect calorimeter (Closed-circuit and open-circuit methods) : Calculation of work output (from respiratory exchange – O consumption and CO production) – Sale of physical effort.
 5. Apparatus required for work measurement – Bicycle Ergometer, Tread mill, Douglas bag, Gas meter, Respirometer, Respiratory gas analyzer and Benedict – Roth respirometer.
- First Aid.

References and recommended books :

Astrand, P.O. and Rodahi (1986) :
Textbook of Work Physiology, New York; McGraw Hill. (Unit I-VIII).
Haupt, W.Q., Feinleis, M.E. (1979) :
Physiology of Movements; Berlin Springer, Vol. 7, Verlag publications.
Grandjean, E. (1968) :
Fitting the Task to the Man; A Textbook of Occupational Ergonomics, London :
Taylor and Francis. (Unit I-VIII).
MC Ardle, D.W., Katch, F.I. and Katch, V.L. (1981 & 1991) :
Exercise Physiology, 4th Edition, Henry Kimpton Publishers.

ELEMENTS OF STATISTICS

Introduction to Statistics :

Definitions, Functions, Uses and limitations Classification and tabulation of data, Qualitative and quantitative classification Discrete and continuous variables, Frequency Tables, Diagrammatic representation of data, Histogram, Frequency Polygon, Frequency curve, Ogives Measures of Central Tendency, Mean, Median, Mode and their Merits, Demerits and Uses.

Measures of Dispersion :

Range, Inter Quartile Range, Quartile Coefficient of variation. Moments, Measures of Skew ness and Kurtosis.

Probability Theory

Definition and simple problems based on probability,

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Test of Significance; Null and alternative Hypothesis, Testing of Hypothesis, t-test, chi-square test of Goodness of fit and chi-square test of independence of attributes.

Binomial and Normal Distributions and their applications.

Introduction to Sampling and techniques of sampling vs types of sampling surveys. Complete enumeration.

Reference and recommended books :

1. D.N. Elhance, Fundamentals of Statistics.
2. Basic Statistics by B.L. Agrawal
3. Mathematical Statistics of Kapoor and Saxena
4. Agriculture Statistics by Singh and Verma
5. Higher Algebra, Hall and Knight.

COMMUNICATION PROCESS IN DEVELOPMENT

Concept of Development Communication :

Meaning and importance of communication in development
The purpose of communication
Existing patterns of communication
Factor that help or hinder communication

Communication Process

One-way and two-way or interactive communication Gaps in communication or distortions in transmission of message and their causes.
Importance of two way communication.
Basis for effective, interactive communication.
Critical reflection of one-self in communication.
Attitude of 'respect for others'
Information Dissemination, Education and Propaganda – distinction. Communication : an educational process.

Methods of Communication in Development

Methods to reach Individuals

Personal conference, Interviews, House visits, Exhibits, Clinics to solve individual problems of consultations, Methods to reach small groups, Illustrated Lecture, Group discussions (Fish Bowl, small group), Simulation Exercises, Trust-building in groups, Cooperation, Affirmative environment creation, Role Plays, Demonstrations, Workshops, Camps, Methods to reach masses, Radio announcements/programs, Newspaper stories, Posters, exhibits in strategic places, Videos, films, Televisions programmes, Letters, folders or pamphlets, Public meetings, Selection and effective use of methods in development education and evaluation the effectiveness of the methods.

Media for Development Communication

Folk Media, Songs, Stories, Street-theatre, Games, Arts, Riddles, Proverbs'
Puppet play, Print Media, Posters, Pamphlets, leaflets, Newspapers – articles, stories, Periodicals – articles, stories, songs, Books, Cartoons, Audios/Visuals, Audio-Visuals Media, Audio-tapes, radio

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broadcasts, Slides, Pictures, drawings, photographs, Videos, telecasts, Films (documentary, feature), Selection, preparation and effective use of media in development education and evaluation of the effectiveness of the media.

Practicals

Application of methods and media for communication in development programs in rural/urban communities

Problem/need identification of a community
Planning an educational Programme
Selection, preparation and effective use of methods and media
Evaluation of the effectiveness of methods and media

References and recommended books :

- Duran, J. (1978) :
Communication for rural Development, London, U.K., British Council.
- Macdonald, I. and Hearle, D. (1984) :
Communication Skills for Rural Development, London, U.K., Evans Books for Rural Development.
- Centre for Development of Instructional Technology (1980) :
Community Communication : A Report of a Workshop, Delhi, India, Centre for Development of Instructional Technology.
- Mody, Bella (1991) :
Designing Messages for Development Communication, New Delhi, Sage Publications.
- Kuppuswami, B. (1989) :
Communication and social Development in India, Bombay, Media Promoters and Publishers Private Ltd.
- Dharma, O. P. and Bhatnagar, O. P. (1988) :
Education and Communication for Development, New Delhi, Oxford and IBH Publishing Co. PVT. Ltd.
- Civikly, M. Team (1979) :
Contexts for Communication, New York, Holt, Rinehart and Winston.
- Malaviya, Seema (1991) :
Communication for Rural Women, New Delhi, Monak Publications Pvt. Ltd.
- Saunders, Denys (1979) :
Visual Communications Handbook, U. K., Lutterworth.
- Bradley, Sarah Myrray (1995) :
How people use pictures. Na annotated Bibliography and Review for Development Workers, London, U. K., International Institute for Environment and Development (IIED) and British Council Pettersson, Rune (1988) : Visuals for Information Esselite Frolag, Seeden, Stockholm.
- UNICEF (1975) :
Communicating with Pictures, monograph, Nepal, UNICEF.
- MCPherson, A. and Tmms, H. (1988) :
The Audio-Visual Handbook, London.

INTRODUCTION TO HUMAN DEVELOPMENT

History perspective of human development

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The Western Perspective
The Ancient Indian Perspective
The Scientific study of children in India

Orientation to Growth and Development

Understanding growth and development (definitions)
General principles of development
Constraints and facilitators in growth and development
(influences of heredity and environment)
Genetic inheritance :

Fertilization, number of chromosomes, the unique third pair determines sex, genotype and phenotype, sex-linked genetic effects.

Environmental prerequisites :

- (i). Nutrition, (ii). Opportunities.

The beginnings of a new life

Prenatal development and the birth process.

Prenatal influences on the child :

biological risks, age of mother, physical characteristics, illness, diet and nutrition, stress and emotional strains, environmental hazards.

Cultural variations in child birth practices.

Development of Physical and Motor Abilities Across the Life Span

An introduction to the dimensions of development over the life span.

Physical and motor

Cognitive

Language

Socio-emotional

Personality

The context of Social Change and Human Development

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, working women.

Influence of national level decisions in human development (i). Child and women's rights, (ii). New economic policy liberalization, (iii). Media boom.

Specific needs for interventions in the context : reaching out to lower economic groups through community based interventions.

Need for developing a body of knowledge tuned to the Indian context.

Reference and recommended books :

1. Aries, P. (1962) : Centuries of Childhood. New York, Vintage. Unit I, whole book.
2. Brostelmann, L.J. (1988) : *Children before Psychology : Ideas about Children form Antiquity to the Late 1800s* (pp. 1-40). In p. Mussen (Ed.), Handbook of Child Psychology, Vol. 1, New York : Wiley. Unit I pp. 1-40.
3. Cole, M. & Cole, S. (1989) : *The Development of Children. New York : Scientific American Books.*
4. Cole, M. & Cole, S. (1993) : *The Development of Children* (pp. 276-313). New York : Scientific American Books. Unit V pp. 276-331. Unit VI, Unit VII, Unit VIII. York : Scientific American Books.

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5. Gay, L. R. (1981) : *Educational Research : Competencies for Analysis and Application*. Ohio : Charles E. Merrill. Unit I pp. 8-12.
6. Gordon, I.J. (1975) : *Human Development*. New York : Harper & Roe. Unit pp. 2-21.
7. Harris, A. C. (1986) : *Child Development*. St. Paul : West pub. Unit I, pp. 5-17.

COMPUTER BASICS

Introduction to personal computer and peripherals attached on it

Operating systems (Dos & Windows), Editors.
Execution of software package : Lotus
Execution of software package : Fox Pro.
Straight line, frequency table, Bar diagram and Pie chart.
Statistical computation : Mean, Median query, Standard Deviation, Correlation and regression, t-test.
Simple Database file creation and query for agriculture Sciences.

Reference and recommended books :

1. Govindaraju, Introduction to Computer Science.
2. Guide to DOS-5 by Perter Norton
3. Basic Statistics by B.L. Agarwal
4. Introduction to Computers and Basic Programming by C. Xavier.

Role of family and community. Stress in family and support mechanisms. Integration of children.

The Child with Communication Disorders

Significance of speech and language in communication.
Definition of communication disorders.
Classification of disorders of speech and language. Multiple disorders.
Causes of organic and functional disorders.
Psychological and behavioral characteristics of children.
Family support and community services in treatment and management.

The Child with Behavioral Disorders

Definitions and characteristics of Behaviour disorders. Contextual and cultural differences.
Ecological and clinical classification.
Behaviour problems associated with autism, schizophrenia, attention deficit hyperactivity disorder, enuresis and encopresis.
Behaviour problems of children showing excessive anxiety school refusal, phobia, temper-tantrums and delinquency.
Biophysical and environmental correlates of disorders.
Role of family in treatment and therapy.

References

- Berdine, W.II. Blackhurst, A.E. (1985) : An introduction to special education (second ed.), Lexington. Harper Collins, (Complete books).
Hallahan, D.P. & Kayffman, J. M. (1991) : Introduction to exceptional children (fifth ed.) Boston, Allyn and Bacon. (Complete Book). Loring, J. & Burn, G. (eds.) (1978) : Integration of handicapped children in society, London, Routledge & Kegan Paul, (Complete book).
Narasimhan, M.C. & Mukherjee, A.K. (1986) : Disability : A continuous Challenge, (Chapters 1, 2, 3).

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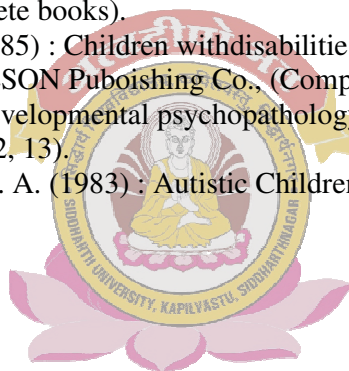
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Werner, D. (1994) : Disabled Village Children, (Indian edition), New Delhi, Voluntary Health Association of India, (Complete books).

Philip, M. Duckworth, D. (1985) : Children with disabilities and their families : A review of research, Windsor, Berks : NFER-NELSON Publishing Co.. (Complete book).

Achenbach, T.M. (1982) : Developmental psychopathology (Second edition), New York, John Wiley, (Chapters 8, 10, 11, 12, 13).

Tinberger, N. & Tinberger, E. A. (1983) : Autistic Children : new Hope for a cure, London, Alien & Unwin, (Chapter 5).



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DEPARTMENT OF HOME SCIENCE

SYLLABUS B.Sc. IInd YEAR

GROUP A			MAX. MARKS	MIN. MARKS
PAPER	I	: NUTRITIONAL MANGEMENT IN HEALTH & DISEASE	50	17
PAPER	II	: BIOCHEMISTRY	50	17
PAPER	III	: COSUMER ECONOMICS	50	17
GROUP B				
PAPER	IV	: APPAREL DESIGNING AND FABRIC FORMATION	50	17
PAPER	V	: ENTERPRENEURSHIP	50	17
PAPER	VI	: APPLIED LIFE SCIENCES	50	17
GROUP C				
PAPER	VII	: COMMUNITY DEVELOPMENT AND CHANGING TRENDS IN EXTENSION DEUCATION	50	17
PAPER	VIII	: TRAINING FOR RURAL DEVELOPMENT	50	17
PAPER	IX	: HUMAN LIFE SPAN DEVELOPMENT	50	17
		GROUP A	50	17
PRACTICAL		GROUP B	50	17
		GROUP C	50	17
		TOTAL	600	204

Syllabus

B.Sc. Home Science

Part – II

NUTRITIONAL MANAGEMENT IN HEALTH AND DISEASE

Definition of Health and Nutrition :

Dimensions of health (Physical, Psychological, Emotional, spiritual)

Energy Requirements : Factors affecting energy requirements

BMR, Activity, Age, Climate, Diet, induced thermo genesis (SDA), Physiological conditions.

Concept of Nutritionally Adequate Diet and Meal :

Planning

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- a). Importance of meal planning
- b). Factors affecting meal planning
Nutritional, Socio-cultural, religious, Geographic, Economic, Availability of time and material resources
Religious, Geographic, Economic, Availability of time and material resources.

Nutrition Through the Life Cycle :

A different activity and Socio-economics levels
Requirements, nutritional problems, food selection

- a. Adulthood
- b. Pregnancy
- c. Lactation
- d. Infancy requirements
- e. Preschool
- f. Adolescence
- g. Old age

Practicals :

Planning and Preparation of diets for different age groups at different socio-economic and activity levels in relation to special nutrient requirements.

- a. Adult
- b. Pregnancy
- c. Lactation
- d. Infancy
- e. Pre-school child
- f. School Child
- g. Adolescence

Planning and preparation of therapeutic and modified diets

- a. Soft diet
- b. Fluid diet
- c. Bland diet
- d. High protein diet
- e. High Fibre
- f. Low fibre diet
- g. Caloric-restricted

References :

- Krause, M. Y. and Mahan, L. K. (1986) :
Food, Nutrition and Diet Therapy, Alan R. Liss, Saunders Co., London.
- Passmore, R. and Danidson, S. (1986) :
Human Nutrition and Dietetics Livingstone Publishers.
- Robinson, C. H., Laer, M.R. Chenoweth, W. L. Carwick, A. E. (1986) :
Normal and Therapeutic Nutrition, MacMillan Publishing Company New York.
- Williams, S. R. (1989) :
Nutrition and Diet Therapy, 4th Ed. C. V. Mosby Co.
- Shils, M. E., Olson, J. A., Shie, M. Eds (1994) :
Modern Nutrition in Health and Therapy, 8th Edn., Fea and Febigger – Awaverly Company.

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1. **Carbohydrates :**
Definition, Classification structure and projects of monosaccharide, Disaccharides, polysaccharides.
2. **Lipids :**
Definition and Classification of lipids type and properties of fatty acids, Composition and properties of fats, Classification structure and physiological significance of phospholipids. Structure of glycol lipids and sterols.
3. **Proteins :**
Basic units of protein. Essential and non-essential amino acids. Nucleotides organization of DNA and RNA Protein synthesis and genetic code.
4. **Enzyme :**
Definition, types, classification and general properties of enzyme and co-enzymes.
5. **Vitamins :**
Chemistry and biochemical role of fat and water soluble vitamins.
6. **Hormones :**
Definition, types and biological role of hormones
7. **Minerals :**
Definition, source and their significance.

Practicals :

1. Reaction of monody and polysaccharides and their identification in unknown mixture.
2. Estimation of reducing and total sugars in foods.
3. Estimation of lactose in milk.
4. Estimation of crude fat content of foods by Soxhlet's methods.
5. Test of proteins in food.
6. Identification of amino acids form their unknown mixtures.
7. Estimation of total N of food by Kjeldahyl's methods
8. Estimation of ascorbic acid content of foods by micrometric method/ colorimetric method.

References :

- Weal, H. S. Lodd. W. R. Mason, H. S. and Van Bruggen, N. (1951) :
1st Ed. Text Books of biochemistry, Amerind Publishing Co. Pvt. Ltd.
- White, A., Handlar, P. Smith Ed., Stehon, D. W. (1959) :
2nd Ed. Principal of biochemistry Mc Graw Hill Book Co.
- Murray, R. K. Granner, D. K., Mayes, P. A. and Rodwell, V. W. (1993) :
23rd Ed. Harper's Biochemistry Lange medical book.
- Lehninager, A. L. Nelson, D. L and Cox, M. M. (1995) :
2nd Ed. Principal of Bio-chemistry, CBS Publishers and distributors.
- Delvin, T. M. (1986) :
2nd Ed. Text book of Biochemistry with clinical Correlation, John Wiley and sons.
- Strayer, I. (1995) :
Biochemistry, Freeman W. H. and Co.

CONSUMER ECONOMICS

Consumption Economics :

Meaning and Definitions

Family as a decision making unit of household Consumer definition

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Consumerism, rights and responsibilities of consumers rights to safety to choose to be heard to be informed, to redress and to healthy environment.

Measures of living and consumption :

Place of living
Level of living
Standards of living
Plan of consumption
Level of consumption
Standard of Consumption
Price level/cost of living



Consumer income :

Types of income real, money psychic, relationship at GNP national income, personal income, disposable income.
Market
Definition
Types of market : Scymentation and Character in markets
Channels of distribution.

Business Cycles :

Monetary theories of business cycle
Non monetary theories of business cycle.
Hyphenation for consumption

Consumer in the Market :

Consumer buying habits Convenience goods specials
Buying motives : Primary, Selective, rational emotional and patronage Consumer product and promotion practices
Types of products
Advertisement, sales promotion, packaging
Public utilities – names and important types, common problems - solutions

Consumer Buying Problems

Adulteration
Faculty weights and measures
Other malpractices in market
Pricing
Legal – guarantee and warrantee contracts, installment buying.

Consumer Decision Making

Good buymanship
Factors affecting consumer decisions.

Consumer Protection Services

Organizations
Legislation – important laws for consumer protection
Consumer representation

Consumer and the Law

Types – basic, social, statutory and their implications.

Reference :

Leland, J. Gordan, Stewart, M. Lee (1994) :
Economic and Consumer, 7th Edn. D'Van Nostiand Co., New York, (Unit I, IV).
Don Welers (1974) :
Who Buys – A study of the consumer, (Unit I, IV, Vi).
Sherlekar, S. A. (1984) :

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- Trade Practices and Consumerism, Himalaya Publishing House, (Unit I, Vi). Sales Management, 5th Edn. Cunliffe Boiling, (Unit II, IV).
- Kotler Philip, Armstrong Gray (1992) :
Principles of Marketing, 5th Edn. Prentice Hall of India, New Delhi. (Unit IV).
- David H. Bangs, Jr. :
The Market Planning Guide, 3rd Edn., Galgotra Publication, (Unit IV, Vii).
- Hansen A. T. (1951) :
Business Cycles and National Income. W. W. Norton & Co. Inc. (Unit III, V).
- Sarkar, A :
Problems of Consumers in Modern India, Discovery Publishing House. (Unit VIII – X).
- Backman, T. R. Moyard, H. H. and Davdson, W. R. (1957) :
Principles of Marketing, Ronald Press, (Unit IV, VI).
- Gordon, L. J. and Lee, S. M. (1972) :
Economics of Consumers, D'Van Nostrand, (Unit I, II, III).
- Cochrane, W. W. and Bell, C. S. (1958) :
The Economics of Consumption, McGraw Hill.
- Conoyer, H. C. and Vailes, R. S. (1951) :
Economics of Income and Consumption, Ronald Press.
- Kaur, Satider (1984) :
Consumer Economics.

APPAREL DESIGNING AND FABRIC FORMATION

1. Sources of inspiration for apparel designing Fashion and Current fashion trends.
2. Study of costume designing and flat pattern making.
3. Principles of pattern making rules in consume designing.
4. Basic Patterns and its fitting.
5. Study of fitting problems in blouse, sleeves and skirt.
6. Study of fabric texture, surface interest and body in relation to garment's designs.
7. Standardization of garments.
8. Method of fabric formation
 - (a). Three basic weaves
 - (b). Non woven fabric constructions, felts and non woven.
 - (c). Knitted fabric, wrap knitting, weft knitting circular knitting.
9. Looms : Shuttle looms, shuttle less looms, gripper looms, rappeics loom, water jet and air jet loom.
10. Adding colour to textiles : natural dyes and synthetic dyes.
11. Classification of dyes; Direct dyes, acid dye, basic dye, vat dye, sulphur dye, azoic dye, mordant dye, disperse dye, reactive dye and pigments.
12. Dying Technique Solution dying fabric and yarn dying. Piece dying cross dying, union dying and tone on tone dying and printing.

Practicals :

1. Sketching
 - a). Figure drawing with different elevation
 - b). Optical illusion of different garment silhouette on figure
 - c). Designing various collars Yokes, sleeves and accessories.
2. Designing and styling with the application of principles of pattern making rules.
 - a). Moving, dividing and combining darts : Pivot and slash method.
 - b). Converting dart into seam lines.

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- c). Adding fullness in blouse by gathers and darts
3. Construction of different types of yokes. Collars, Peter pan, sailors collar, shawl collar pollo collar, Sleeves; Set – in sleeve and its variations, kimono sleeve, drop shoulder sleeve.
 4. Skirts : Six gored skirt, circular skirt and skirt on bias.
 5. Construction of cut in one garment for adult using flat pattern technique.
 6. Fabric Formation

References :

Bane, Allyne, Flat Pattern Design. McGraw Hill Book, 1972, New York.
Brogden, Jbanne, Fashion Design. Van Nostrand Reinhold Company, 1974, London.

ENTREPRENEURSHIP

1. **Entrepreneurial quality and motivation-Entrepreneur and enterprise entrepreneurial qualities, assessing entrepreneurial qualities.**
 - Entrepreneurship development
 - Conceptualizing entrepreneurial skills and Behaviour
 - Achievement motivation and types of opportunity.
2. **Environmental scanning and opportunity Identification**
 - Methods, sources and types of opportunity
 - Assessment criteria and profiling opportunities
3. **infrastructure and support system**
 - Industrial support agencies
 - Procedures and Steps involved in setting up an enterprise
 - Whom to contact for what?
 - Schemes of assistance
 - Source of information and industry organizations.
4. **Project planning and formulation**
 - Project identification and product selection.
 - Project identification. Generating project idea, short listing final selection
 - Market survey, Market alternatives, an overview of the future.
 - Product development
 - Product selection
 - Preparation of project report
 - Launching the Enterprise
 - Project formulation and report preparation
 - Pre-feasibility and feasibility
 - Project size and investment magnitude estimation
 - Selection of appropriate technology
 - Cost estimation
 - Technical, financial, commercial and economic viability
 - Project scheduling
 - Report preparation
 - Project implementation related issues
5. **Enterprise management**
 - Basic management concepts
 - Personnel management
 - Product management
 - Materials management

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Financial management & accounting
Marketing management
Crisis management
Industrial and business laws
Indian contract Act.
Sale of goods Act.



6. Interaction with successful entrepreneurs

law Governing Taxation : Negotiable
Instruments Act Sales Tax Rules,
Income Tax Rules, Excise customs

Practicals

1. Assessment of entrepreneurial traits
Thematic Appreciation Test (TAT)
Who am I?
Paired Comparison Test (PCT) and Sentence Completion Test (SCT)
Risk Taking Behaviour (Ring Toss)
Conceptualizing entrepreneurial values
(block building exercise)
Achievement planning exercise
(Business game)
Interaction with support agencies
(Discussion)
2. Project Planning, formulation and report preparation
(individual/group exercise)
3. Interaction with entrepreneurs
(industry visits)
4. Case studies

References :

1. Desai, V. 1991, Entrepreneurial Development, Vol. I, II, III, Himalaya Publication, Bombay.
2. Pareek, U. and Rao. T. V. 1978 : Developing Entrepreneurship. A Hand Book, Learning Systems.
3. Mishra, D. N. 1990 : Entrepreneur, Entrepreneurship Development and Planning, Chug Publishers, Allahabad.
4. Chandra, Santa Kohli, 1991 : Development of Women Entrepreneurship in India, Mittal Publisheres, New Delhi.
5. Gupta, Ramavtar 1992, Industrial Entrepreneurship. Print Well, Jaipur.

APPLIED LIFE SCIENCES

General Principles of Physiology

Elementary anatomy of various systems.

Gastrointestinal System

Structure and functions of various organs of the GI Tract.
Digestion and absorption of food and the role of enzymes and hormones.

Reproductive System

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Structure and functions of sex glands and organs including hormones.
Menstrual Cycle.
Physiology of pregnancy, Parturition, Lactation and Menopause.

Excretory System

Structure and functions of kidney, bladder, formation of urine, role of kidney in homeostasis.
Structure and function of skin.
Regulation of temperature of the body

Nervous System

Elementary Anatomy of Nervous System
Functions of different parts of the brain in brief
Automatic, sympathetic and Parasympathetic nervous system, Special Sense.

Classification of micro-organisms, molds, yeasts and bacteria, characteristics

Useful and pathogenic organisms.

Laying out of a kitchen Garden

Principles of planning and cultivating of vegetables and fruits with special reference to nutritionally relevant fruits and vegetables.

Propagation of less commonly used herbs, vegetables and fruits including medicinal herbs.

Use of Tissue Culture to improve nutritional quality

Common parasitic infections

Malaria-parasite, physiology and life history, *E. histolytic*, nematodes, helminthes.

Insect pests

Life history and control of pests of cereals/pulse and stored products – rice weevil, lesser grain borer, (Rhizopetha), Copea Weevil, (Gram Dhora). Tribolium, Cockroach.
Termites and other non-insect pests like Rats, mice and birds.
Grain Storage : Principles and toxicology with reference to home.

Human genetics :

Human Chromosomes the inheritance and variation in man.
Abnormalities of autosomal chromosomes and chromosome structure. The genetic basis of human disease sickle cell, anemia, hemophilia, colour blindness and diabetes. Genetic Counseling.

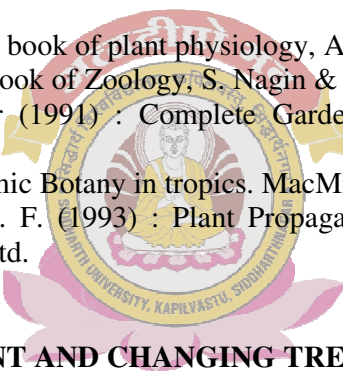
References :

1. Guyton, A. C. Hall J. E. (1996) : Text book of Medical Physiology, 9th Ed. Prism Books (Pvt.) Ltd., Bangalore.
2. Winwood (1988) : Sera's Anatomy and Physiology for nurse. London, Edward Arnold.
3. Wilson (1989) : Anatomy and Physiology in Health and illness, Edinburgh, Churchill Livingstone.
4. Chatterjee Chandi Charan (1988) : Text Book of Medical Physiology, Lindon, W. B.
5. Saunder's Co. Verma. V. (1986) : A Text Book of Practical Botany. Vol. I to IV. Rastogi Publication.

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6. Anderson, D. B. and Mayer, B. S. (1970) : Plant Physiology, Van Nostrand Reinhold Company, East West Press Edition.
7. Kochhar, P. L. (1994) : A text book of plant physiology, Alma Ram & Sons, Delhi.
8. Dhami, P. S. (1987) : A text book of Zoology, S. Nagin & Company, Jullundhar.
9. K. S. Gopalaswamy Iyengar (1991) : Complete Gardening in India, Bangalore, Gopalaswamy Parthasarthy.
10. Kochar, S. L. (1981) : Economic Botany in tropics. MacMillan, India.
11. Hartmann, H. and Kester, D. F. (1993) : Plant Propagation Principles and Practice, New Delhi. Prentice Hall of India (Pvt.) Ltd.



COMMUNITY DEVELOPMENT AND CHANGING TRENDS IN EXTENSION EDUCATION

Development

Definitions, types – large scale and centrally planned and small scale and locally planned.

Concept of extension

Meaning of Extension
Origin and wider

Extension models

Technology – Innovation – Transfer Model
Social Education Model
Indigenization Model
Social Action/Conscientization Model
Empowerment/Participation Model

Extension Education Process

Environment for Learning; Role of the Educator; dictator to facilitator;
Role of the people (participants) passive, complacent active participants in learning and development.
Communication process monologue or closed communication.
Learning experiences imposed, information oriented to experiential meaning a high level of emotional response. Learning initially in the affective domain with later reinforcement in the cognitive domain. Feedback and Evaluation could vary from being terminal, Controlled by the educator to on-going joint affair.

Practicals

Observation of Extension Programs and Reporting about the Model(s) represented and the Educational Process and critically examine the programmes.

References :

- Rogers, Alan (1989) :
Teaching Adults in Extension Education for Development. Westwood Row, Tilehurst
READING RG 31 6 LT England, Woodmans.
- Roger, Alan (1989) :
Teaching Methods in Extension Education for Development, Westwood Row Tilehurst,
READING RG 31 6 LT, England, Woodmans.

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Reddy, A. (1987) :

Extension Education, Bapatia, India, Sree Lakshmi Press.

WHO (1988) :

Education for Health, Geneva, Switzerland, World Health Organization.

McGivney, Veronica and Murray Frances (1991) :

Adult Education in Development Methods and Approaches form Changing Societies, Leicester, U.K., National Institute of Adult and Continuing Education.

Oakley, Peter and David, Marsden (1984)

Approaches to Participation in Rural Development Published on behalf of the ACC Task Force on Rural Development. Geneva, International Labour Office.

TRAINING FOR RURAL DEVELOPMENT

Concept of training

Meaning of training

Types of training – Institutional, Interactive and Participatory.

Assumptions underlying each of the types.

Training Approaches

Creativity Training – stating and solving problems creatively.

Field training

Group dynamics

Laboratory training

Motivation training

Self-awareness and Self-development

Examples of training activities that use one or a combination of approaches.

Techniques for Training

For understanding problem

Group activities

Perception exercises

Understanding self and other exercises

Serialized posters

Anxiety sharing

For capacity building

Need identification exercises

Problem solving exercises

Inter group collaboration planning the programme

Discussing in a group on issues of importance

For attitude and value development

Role playing

The Fishbowl

Practice in observation – Empathy

Real life story analysis

For involving people in the Community

RRA/PRA exercise

Practicals

Observation of training Programmes

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Selecting a development project in the area
Identifying an area of training for the project personnel at one level
Developing a training plan according to their needs.
Conducting and / or coordinating the training programmes
Reporting the entire process

References :

- United Nations, Department of Economic and Social Affairs (1978) :
A Manual and Resource Book for Population Participation – Training Vol. I. Introduction, Vol. II. Selected Examples of Innovative Training Activities, Vol. III. A Selected Group of Training Approaches, And Vol. IV. Techniques.
- Lynton, Rolt P. and Pareek, Uday (1967) :
Training for Development, Homewood, Ilwrois, Dorsey Press.
- Wesehler, Irring R. and Schein, Edgar H. (1962) :
FIVE Issues in Training, Washington, D. C National Training Laboratories Learning Resources Corporation.
- Bhasin, Kamala (1979) :
Breaking Barriers – A South Asian Experience of Training for Participatory Development, Rome, FAO, FFIID/AD.
- Chambers, Robert (1992) :
Rural Appraisal : Rapid, Relaxed and Participatory, IDS – Institute of Development Studies. Brighton, BNI 9 RI, England, University of Sussex.
- Cousins, W. J. (1978) :
Group Discussion : A Hand book, New Delhi, UNICEF.
- FAO of the U.N. Bay of Bengal Programmes – Development of small Scale Fisheries (1985) :
Towards Shared Learning; Non-Formal Adult Education for marine Fisher folk Trainers Manual.
- Hope, Anne and Timmel, Sally (1984) :
Training for Transformation. A Handbook for Community Workers, Books I, II, III, gururu, Zimbabwe, Mambo Press.
- Leurs, Robert (1993) :
A resource Manual for Trainers and Practitioners of Rural Appraisal (PRA) Papers in the Administration and development No. 49. Birmingham. Development Administration Group.
- Pfeiffer, J.W. and Jones, J. E. (Ed.) (1974) :
A Handbook of Structural Experiences for Human Relations Training (8th Volunes)
California, University Associates.
- Staley, John (1982) :
People in development : A Trainers Manual for Groups Bangalore, SEARCH.
- Stalcy, John and C. Sudgen (1981) :
Poverty and Development : A Programmers's Course, Bangalore, SEARCH.

HUMAN LIFE SPAN DEVELOPMENT

Introduction

The Human life span development perspective and the need to study development through the life cycle.

Prenatal Period

Course of prenatal development, overview of birth process and complications.

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Conditions affecting prenatal development.

Hazards during prenatal development.

Infancy (0-2 Years)

Definition, Physical growth and development in infancy (Reflexes, emotional states, Physical growth and motor development, brain).

Sensory and perceptual development during infancy – Definition .

Development of mental senses

Developmental tasks of infancy, milestones, and highlights of development

Factors influencing development

Importance of Social Relationships

Role of parents, siblings, peers and others during the Various stages of the life span.

Early Childhood (2 to 6 years)

Definition

Overview of early childhood years – Highlights, developmental tasks, Milestones.

Pre-School Orientation of pre school education and significance.

Importance of play for all round development.

Middle Childhood (6 to 12 years)

Definition

Development tasks

School-significance and function. Effects of success and failure

Peer Group – Importance, function in the life of children.

Adolescence (13 to 18 years)

Definition, Different views regarding the period

Physical development – puberty, growth spurt, primary and secondary sex – characteristics, early and late maturing adolescents.

Identify – Definition, body image, positive and negative outcomes (role confusion, ego-identity).

Choosing a career – stages, factors affecting selection.

Peers and Heterosexual relationship – Importance, age of occurrence, patterns of friendship (to be discussed).

Heightened emotionality – meaning, causes, expression characteristics of emotional maturity, Conflict with authority.

Problems – drug and alcohol abuse, psychological breakdown STD & AIDS pregnancy.

Young Adulthood (19 to 40 years)

Definition of an “Adult”, need to study.

Developmental tasks of a young adult, significance of the period, responsibilities and adjustment : New family, work place, parenthood, independence, financial matters.

Sex role issues and implications for young adults.

Middle Adulthood (41 to 60 years)

Definition, Physical changes (senses, disease)

Menopauses, Health Issues

Stresses in middle age, coping with stress at family workplace.

Occupation and job satisfaction

Pre retirement and leisure preparation for retirement

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Late Adulthood and Ageing

Definition, Physiology changes, Health problems and cognitive and memory changes.

Retirement effect of retirement on self, family, society, financial problem faced.

Personality characteristics of old age factors in ageing.

Social family factors, attitudes towards the aged, old age and friendship.

Interests – recreational interest of the aged.

Issues – Old age homes, loneliness, coping with loneliness, living in joint family, prolonged illness (Plan visit to old age homes).

Death – Preparation and coping strategies.

References :

Berk, L. E. (1996) : Child Development, New Delhi : Prentice Hall.

Graig, G. (1999) : Human Development, N. J. : Prentive Hall.

Cole, M. & Cole, S. (1995) : The development of Children, NY Freeman & Co.

Gardiner, H. W. Mutter, J. D. & Kosmitzki (1998) : Lives Across Cultures Boston, Allyn & Bacon.

Lerner, R. M. & Hultseh, D. (1983) : Human Development : A Life Perspective, NY : McGraw Hill.

Rice, R. f. (1965) : Huma Development : A Life Approach, N. L. : Prentice Hall.

Santrock, J. W. (1997) : Life Development, NY Brown & Bench mark

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DEPARTMENT OF HOME SCIENCE

SYLLABUS

B.Sc. IIIrd (FINAL) YEAR

GROUP A			MAX. MARKS	MIN. MARKS
PAPER	I	: DIET THERAPY AND COMMUNITY NUTRITION	50	17
PAPER	II	: MICROBIOLOGY, HYGINE AND SANITATION	50	17
PAPER	III	: NON-FORMAL EDUCATION	50	17
GROUP B				
PAPER	IV	: TEXTILE DESIGNING AND LOUNDRY PROCESS	50	17
PAPER	V	: RESIDENTIAL SPACE DESIGN AND FURNISHING	50	17
PAPER	VI	: METHODS AND MATERIALS FOR WORKING WITH YOUNG CHILDREN	50	17
OPTIONALS				
PAPER	I	: NUTRITIONAL ASSESSMENT AND SURVEILLANCE AND PROJECT		
PAPER	II	: THE CHILD WITH SPECIAL NEEDS AND PROJECT		
PAPER	III	: TEXTILE HANDICRAFTS AND COMMERCIAL CLOTHING AND PROJECT	50	17
PAPER	IV	: POTTERY CERAMIC AND PLASTIC ART AND PROJECT		
PAPER	V	: ADVERTISEMENT AND VISUAL PUBLICITY AND PROJECT		
GROUP A			100	33
PRACTICAL				
GROUP B			100	33
PROJECT OPTIONALS			50	17
TOTAL			600	202

DIET THERAPY AND COMMUNITY NUTRITION

Basic concepts of diet therapy

Therapeutic adaptations of normal diet, principles and classification of therapeutic diets.

Team approach to health care, Assessment of patient's needs.

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Routine hospital diets

Regular, light, bland, soft, fluid, Parenteral and enteral feeding.

Energy modifications and nutritional care for weight management

Diets for febrile conditions, infections and Surgical conditions

Etiological factors, symptoms, diagnostic tests and management of hepatitis, cirrhosis, diabetes mellitus, peptic ulcer, diarrheas, hyperlipidemias, atherosclerosis, heart disease, glomerulonephritis, renal failure, urinary calculi.

Nutritional consideration in children's Diseases :

Measles, gastrointestinal problems, allergies.

Anemia's :

Pathogenesis and Dietary Management : Nutritional Anemia's, Sickle cell Anemia's. Thalassaemia, resulting form Acute Hemorrhage.

Role of nutrition education programme in eradication of malnutrition; improving amount and variety of food supplies; improving family income and its influence on nutritional status; improving food consumption to meet individual needs in the family; improving environmental hygiene.

Community nutrition as a field :

Public health nutrition, goals for nutrition programmes, dietary guidelines; present trends and focus for community nutrition.

Introduction to national nutrition programmes and policies :

Programmes for improving nutritional status at national level : Integrated Child Development Services (ICDS); National Rural Development Programme (NRFDP); National Rural Employment Programme (NREP); miscellaneous monofocal programme.

Role of International Agencies and Programmes in Community Nutrition :

Food and Agriculture Organization (FAO); World Health Organization (WHO); United Nations Children's Fund (UNICEF); other voluntary and government agencies.

Food Production Systems in India; their influence on food supply; major foods and their state wise production in India.

Practicals

Standardization of common food preparations for portion size.

Planning and preparation of normal diet

Planning and preparation of fluid food preparations :

Clear fluid preparations, Full fluid preparations. Planning and preparation of fluid diet clear & full fluid.

Planning and preparation of Recipes for soft semi-solid diet.

Mechanical, pureed, Planning and Preparation of soft diet.

Planning and preparation of recipes using protein concentrates

Planning and preparation of recipes using sugar concentrates

Planning and preparation of low fat and low calorie recipes.

Planning and preparation of high fiber recipes

Planning and preparation of low fiber and low residue recipes

Planning and preparation of bland diet recipes

Planning and preparation of diets for the following conditions

Overweight and obesity, underweight, fevers, ulcers, diarrhea, constipation, malabsorption syndrome, viral hepatitis, liver cirrhosis, cholecystitis, nutritional anemia's.

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Formulation of nutrition and health related messages for presentation to the community through radio script, popular article, chart/posters, leaflets, games.

Visit to an ICDS block/an ongoing project site where nutrition education is a part of programme.

Reference :

- Anderson, L., Dibble, M.V., Tukki, P.R., Mitchall, H.S., and Rynbergin, H.J. (1982) :
Nutrition in Health and Disease, 17th Ed., J. B. Lippincott & Co. Philadelphia.
- Anita, F. P. (1973) :
Clinical Dietetics and Nutrition, Second Edition, Oxford University Press, Delhi.
- Mahan, L. K. Artin, M. T., (1992) :
Krause's Food, Nutrition and Diet Therapy, 8th Ed., W. B. Saunders Company, London.
- Robinson, C. H., Lawler, M.R., Chenoweth, W. L., and Garwick, A. E. (1986) :
Normal and Therapeutic Nutrition, 17th Ed., MacMillan Publishing Co.
- Williams, S. R. (1989) :
Nutrition and Diet Therapy, 6th Ed., Times Mirror/Mosby College Publishing, St. Louis.
- Raheena, Begum (1989) :
A Testbook of Foods, Nutrition and Dietetics, Sterling Publishers, New Delhi.
- Joshi, S. A. (1992) :
Nutrition and Dietetics, Tata McGraw Hill Publication, New Delhi.
- Obert, J. C. (1986) :
Community Nutrition, 2nd Ed., MacMillan Publishing Co., New York.
- NIN, 1988-90 :
National Nutrition Monitoring Bureau Report.

FOOD MICROBIOLOGY, HYGIENE AND SANITATION

Brief history of food microbiology and introduction to important micro organisms in foods.

Cultivation of micro organisms :

Nutritional requirements of micro organisms, types of media used, methods of isolation.

Primary sources of micro organisms in foods, physical and chemical methods use in the destruction of micro organisms (Sterilization and Disinfection).

Fundamentals of control of micro organism in foods :

Extrinsic and intrinsic parameters growth and survival of microbes, use of high and low temp., dehydration, freezing, freeze-drying, irradiation and preservatives in food preservation.

Food Spoilage :

Contamination and micro organisms in the spoilage of different kind of foods and their prevention. Cereal products, vegetable and fruits, fish and other sea foods, meat and meat products, egg and poultry, milk and milk products, canned foods.

Public health hazards due to contaminated foods :

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Food borne infections and intoxications – symptoms, mode and source of transmission and methods of prevention, investigation and detection of food borne disease out-break.

Microbes use in food biotechnology, Fermented foods and their benefits.

Importance of sanitation and hygiene in foods, kitchen hygiene, employee health, food plant hygiene. Foods laws.

Indices of food, milk and water sanitary quality :

Microbiological criteria of foods, water and milk testing (Bacteriological analysis)

Practicals :

Demonstration of the different parts of the microscope, their use and care of the microscope including oil immersion lens.

Preparation of bacterial smears, simple staining, differential staining, spore staining, staining of molds and yeasts.

Preparation of common laboratory media for cultivation of bacteria, yeast and molds.

Morphological Identification of important molds and yeast in foods (slides & cultures)

Rhizopus, Mucor, Aspergillus, Penicillium, Saccharomyces, Fusarium, Cladosporium, Alternaria, Helminthosporium.

Sampling of air, water, dust, soil, food handlers study the various sources of transmission of microorganism, in foods.

Demonstration of microbiological analysis of water, milk and food for enumeration of standard plate count and coliform count.

Assessment of surface sanitation of kitchens by swab rinse methods.

References :

Frazier, W.C. and Westhoff, D.C. (1980) :

Fourth Edition, Food Microbiology, McGraw Hill Inc.

Jay James, M. (1986) :

Third Edition, Modern Food Microbiology, Van Nostrand Reinhold Company Inc.

Plezer, M. I. and Reid, R. D. (1978) :

Microbiology, McGraw Hill Book Company, New York.

Benson Harold, J. (1990) :

Microbiological applications, Wm. C. Brown Publishers, U.S.A.

Collins, C. H. and Lyne, P. M. (1976) :

Microbiological Methods, Butterworth, London.

NON-FORMAL EDUCATION

Concept of non-formal education :

Meaning of Education, Adult Education and Non-formal Education.

Education Science in India : availability and accessibility to educational facilities – exclusion of vast majority.

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Alternatives supplementary to Formal Education – Non-formal Education for adult and children.

The purpose of adult education non-formal education.

History of Adult Education in Post Independent India :

The Gram Sikshan Monim
Farmer's Functional Literacy Projects
Non-formal Education Programme (NAEP)
National Adult Education Programme (NAEP)
Rural Functional Literacy Project (RRLP)
State Adult Education Programme (SAEP)
Adult Education through voluntary agencies
National Literacy Mission (NLM)

Adult Literacy :

Literacy Scenario of the nation, state, district and local areas

Goals of literacy :

Literacy as a tool for modernization – learning the skill of reading and writing.
Literacy skill development for modernization (reading the word)
Literacy in its social context implying power relations – literacy as a part of adult education and development (reading the world).
Choice of language for literacy, dialect vs. standard

Literacy Pedagogy :

Functional orality ; Meaningful use of oral language parallels between oral language acquisition and acquisition of reading and writing.
Literacy materials and their reflections of oral traditions. Kinds of literacy materials available and their impact on literacy learning.
Role of the teacher and the learner in literacy programs.

Post literacy :

Continuing education – autonomous learning, consolidation of acquired literacy – understanding of society.
Processes and activities – content, vocabulary building, increased genuine knowledge and its applications – critical reading.
Levels of competency standard.
Design and development of materials
Implementation strategies at National/State/Grass root levels.

Planning adult education programme :

Creating a learning environment – promoting equality of relationships, respect for people, trust in one's own ability to solve problems, sharing in decision making and responsibility for learning.
Mobilizing local/outside resources-material as well as human.
Identifying adult educators. Selection from the local community : criteria, commitment and educational level.
Training : Pre-service, In-service and Field Support System – Need; Models of training : Developmental (bottom – up and problem- solving) and deficit (top down, input based) models; content and methods of training.

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Planning curriculum :

Philosophical frame (ideological base)
Problems/needs of the learners
Environment for learning
Contents and sequencing of contents
Activities/learning experiences
Preparation/ selection of materials
Activities for feedback, critical reflection and appraisal
Women Empowerment: Women as Partners in developmental process.

Practicals :

Literacy Programme Planning :

Adult Learner's Profile
Situation analysis for problem/need identification of adult learners
Identification of key words

Preparation of Learning Materials :

Preparation of learning materials based on key words : more words and sentences.

Evaluation :

Use of the prepared materials
Feedback mechanism
Evaluation of the programme

References :

- Rogers, Alan (1991) : Adult learning for Development, Casell, Published in Association with Education for Development, Westwood Row, Tilehurst READING RG3 6 LT, U.K., Woodmans.
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- Levine, K. (1985) : The Social Context of Literacy, London R.K.P.
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- Roy, Aruna (1984) : Education of Out of School Children : Case Studies from India, Marlborough House, Pall Mall, London, SE 1 Y 5 HX, U.K. Common Wealth Secretariat.
- Pillai, K. S. (1993) : ABC of Non-formal Education, 17 B, Indraprastha Estate, New Delhi, India Adult Education Association.
- Srinivasan, Iyer (1977) : Perspectives on Non-formal Adult Learning 251. Park Avenue South, New York 10010. U.S.A. World Education Inc.
- McGivney, Veronica and Murray, Frances : Adult Education in Development – Methods and Approaches for Changing Societies, 19 B De Mont fort Street, Leicester LE 1.7 GE, U.K. National Institute of Adult and Continuing Education.
- UNICEF : Reaching the unreached – non-formal approaches and University Primary Education, Education Cluster Programme.
- British Deputy High Commission, British Council Division (1993) : Indo-British Workshop on Women, Literacy and Development, Madurai, India.

TEXTILE DESIGNING AND LAUNDRY PROCESS

- 1. Fabric Formation :**
 - (a) Woven designs
 - (b) Decorative designsApplication of various designing principles in textile designing
Weaves : Drafting, lifting and tie up plans.
General information about fancy and ornamental weaves.
- 2. Printing techniques**
 - (a) Hand printing methods.
 - (b) Automatic printing methods.
- 3. Introduction of laundry process.**
Wet and dry cleaning
Materials and equipments in laundry
- 4. Water – Hard & Soft water – temporary and permanent hardness.**
Problems and their cleansing action.
- 5. Soaps and detergents – definition, chemical nature, manufacture, properties and their cleansing action.**
- 6. Bleaches – Classification, Commercial products, application of bleaches to various fiber & fabrics.**
- 7. Starches, stiffeners and softeners – various types and their characteristics, methods of application.**
- 8. Principles of laundering – Hand washing methods, washing machines, types and uses.**
- 9. Care labels – The two international systems of labeling, Laundering procedures for various fiber fabrics, precautions to be taken.**
- 10. Dry Cleaning – Technology agents – classification.**
- 11. Stain Removal – Classification of Stains. Principles of removal. Types of stain removals. Techniques of stain removal.**
- 12. Storage – Apparel and household linen.**
- 13. Disinfection of clothes.**

Practicals :

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1. Weaving : Graphical representation of straight draft plan, lift plan and tie-up of plain weave and its variations.
2. Preparation of handloom for plain weave and weaving of sample identification of fancy weaves.
3. Identification of fancy weaves
4. Design development : All over design, border design, spot design and pallav design.
5. Printing : Block printing, stencil printing, tie and dye and bati with different dyes.
6. Preparation of sevens with enamel coating
7. Screen printing
8. Stain removal
9. Laundering of cotton, rayon, silk, wool and synthetics etc.
10. Bleaching and whitening
11. Starching
12. Care of household linen
13. Dry cleaning
14. Visit to a printing and dry cleaning unit.



References :

- Alexander, R. R. (1977) :
Textile Products Selection use and care Boston Houghton Mifflin Co.
- Duelkar Durga (1976) :
Household Textiles and laundry work, Delhi Atmaran and Sons.
- Abbers, Anni, on weaving. Studio Vista Limited 1966, London
- Clarke, W. An introduction to Textile Printing. Newness Butterworths, 1974 London.

RESIDENTIAL SPACE DESIGNING AND FURNISHING

Introduction to Fundamentals of art :

Design, Definition and types : Structural and Decorative

Elements of design :

- Line
- Size
- Form
- Structure
- Space
- Pattern
- Shape

Light : Characteristics and classification

Study of colours – classification, dimensions, colour schemes and effect principles of design – definition and their characteristics and types :

- Balance
- Harmony
- Scale
- Proportion
- Rhythm
- Emphasis

Indian, Regional, traditional and Contemporary arts and their use in

- Floor Decoration
- Home Decoration

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Accessories

Appreciation of art

In terms of principles of art and design
In terms of composition and aesthetic appeal

Family's Housing Needs

Protective, economic, affectation, social standard of living housing goals, style, function, occupation.

Factors Influencing Selection and purchase of Site for House Building

Legal aspects, Housing standards, Housing by Laws Location, Physical features, Soil conditions, Cost, Services.

Housing Planning

Reading house plans

Grouping of rooms, orientation, circulation, flexibility, privacy, spaciousness, services aesthetics, economy light and ventilation. Planning different rooms : Living room, Dining room, Bedrooms, Kitchen, Store Room, Toilet, Passage, Staircase.

Landscape planning – principles and application.

Financial Considerations

Availability of funds for housing
Housing Development Finance Corporation
Cooperative Housing Society
Life Insurance Corporation
Cooperative Banks
Loan from Provident Fund
Finance Corporation of India
Disability of owning versus renting

State and Central Housing Scheme

Housing problems, Causes and remedial measures.

Furniture

Development of Furniture design based on anthropometric dimensions.
Styles of furniture – traditional, contemporary and modern. Selection of furniture for comfort, rest and relaxation for work, for storage.
Arrangement of furniture for living, sleeping, dining and multipurpose rooms.
Upholstered furniture materials, techniques and designs.

Furnishing

Types of curtains, draperies, floor coverings, rugs and carpets, cushion covers, slip covers, bed linen and table linen.
Selection and use.

Accessories and their Role in Interiors

Practicals :

1. Freehand drawing : memory drawing and sketching
2. Scale drawing, solid geometry, orthographic.
3. Preparation of colour wheel and colour scheme.
4. Elements of design laws of field, size, proportion, types of shadows.
5. Residential space planning – scale, lines, abbreviations. Metric projections, defining space by shades, shadows.
6. Lettering.
7. Use of Colour for wall/floor decorations and making accessories.
8. Application of design principles in flower arrangement – demonstration. Appreciation of art from the point of view of principles of design composition.

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9. Gift wrapping and preparing decorative articles.
10. Drawing house plans with standard specifications.
11. Furniture layout of living, dining, kitchen and bedroom, Design presentation with furniture layout. Sectional elevation, views.
12. Development of designs and construction of any five of the under mentioned items.
13. Cushions, Curtains, Carpets, Door mats, Rugs, Table mats.
14. Conventionalizing historic motifs.
15. Wall paintings, Picture frame designs.
16. Crafts out of fibre, fabric coir, bamboo, clay metal etc.
17. Graphic designs.
18. Flower arrangements, styles, innovation of new styles.

References :

- Rutt Anna Hong (1961) :
Home Furnishing, Wiley Eastern Pvt. Ltd.
- Bhat Pranav and Goenka Shanita (1990) :
The foundation of art and design, Bombay : Lakhani Book depot.
- Goldstein, H. and Goldstein, V. (1960) :
Art in Everyday life; New Delhi : Oxford and IBII Publishing Company.
- Anna, H. Rutt (1961) :
Home Furnishing, Hohn Wiley Eastern Private Ltd., New York. (Unit III).
- Deshpande, R. S. (1980) :
Modern Ideal Homes for India, (9th Edn.). Smt. L. S. Deshpande for Deshpande Publications Trust. (Unit II, III, IV, VII).
- Deshpande, R. S. (1980) :
Building your own House, United Book Corporation. (Unit I, II, III).
- Conran Terrance (1985) :
New House Book, United Book Corporation. (Unit I, II, III).
- Modak, N.V. and Amdekar, V. N. (1971) :
Town and Planning Husing, Orient Longman. (Unit II, III).
- Rangwala S. (1974) :
Town Planning, Anand, Character Book Stall.
- Chudley, R. (1973) :
Construction Technology (1), English Language Book Society and Longman Group (Ltd.).
- Tessle Agan (1986) :
The House : Its Plan and Use, New York, J. B. Lippincott Co.
- Leach S. Del Mary (1983) :
Techniques of Interior Design Rendering and Presentation New Yourk McGraw Hill.
- Faulkner, S. (1977) :
Planning a House, Rnehart and Winson, (Unit I, III).

METHODS AND MATERIALS FOR WORKING WITH YOUNG CHILDREN

Infancy and Toddler hood :

Development during the first two years in rapid and hence the topic is subdivided in four parts. Each part focuses on a particular age group that would enable care-givers to understand the specific needs of growing children. Knowledge of needs would help them to plan appropriate activities.

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- (a). Characteristics of human childhood.
(from state of helplessness to gradual control over body and development of understanding of immediate environment).
- (b). Development through interaction of maturation and stimulation from environment, exploration.
- (c). Importance and ways of meeting child's psychological needs to promote feelings of security, trust and acceptance.

Activities according to developments for various age groups.

- (a) 0-6 months.
Activities for stimulation and sensory motor experiences with emphasis on seeing, hearing, touching, feeling sensation and movements.
- (b). 7-12 months.
Integration of experiences involving more than one sense to deepen sensor-motor experiences. Promote manipulation, concept formation, communication and perceptual discrimination.
- (c). 13 – 24 months.
Promotion of co-ordination and control of body movements, gross and fine motor skills, Strengthening concept formation, imagination and communication through language. Promotion of problem solving, environment to explore and satisfy curiosity and develop confidence.
- (d). 25 – 36 months.
Improvement in body movement and communication skills, social skills and concept formation.

Creativity

Concept of creativity and highlights of the role of creative expressions in overall development of children.

Creative expressions, Meaning and definition of creativity expressions. Role of teacher in planning and fostering creative expressions.

Creative expressions through a variety of media i.e. painting, printing, modeling, cutting, pasting, blocks puppetry, music movement, drama and language.

Art activities :

Painting and graphics

- (a). Painting with brush, drawing with crayons, chalk, rangoli on floor, finger painting. (Some special characteristics of the medium).
- (b). Values, materials required, use of substitutes from indigenous materials.
- (c). Teacher's role in conducting activities.
- (d). Stages in child art.

Tearing, cutting, pasting and collage, mural

- (a). Values, materials required and Teacher's role in conducting activities.
- (b). Development stages.

Modeling

- (a). Values, special characteristics of this medium
- (b). Techniques used, rolling, pressing, pinching, pasting, folding.
- (c). Materials required i.e. clay, dough, Plasticine, thick paper folding, stocking paper on hollow objects i.e.
- (d). Teacher's role.

Printing

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- (a). Types of printing i.e. block, vegetable, string, leaf stencils, spray, crumpled paper, different textured surfaces.
- (b). Values, materials required techniques.
- (c). Teacher's role stages in printing.

Blocks

- (a). Some special features of this medium
- (b). Types of blocks : Hollow large blocks, unit blocks and small blocks.
- (c). Stages in Block play
 - (a). Values, materials and accessories for block play.
 - (b). Teacher's role.

Other Materials

Sand

- (a). Characteristics of the medium
- (b). Values, materials required and teacher's role

Water

- (a). Characteristics of the medium
- (b). Values, materials required and teacher's role

Music and Rhythm

Importance of music in child's life and teacher's role in providing appropriate experiences.

- (a). Criteria for selection of songs.
- (b). Creating environment for musical growth.
- (c). Developmental stages in musical activities.
- (d). Rhythmic movements body and with simple musical instruments.

Puppetry and Creative Drama

Puppetry

- (a). Characteristics of puppetry as a medium
- (b). Values of puppetry
- (c). Kinds of puppets : finger, glove, stick and string puppets.
- (d). Basic staging techniques, use of lights, and simple sound effects in puppetry.

Creative Drama

- (a). Meaning and values
- (b). Techniques involved in creative drama e.g. rhythmic movements, pantomime, characterization, improvisation story building.
- (c). Process of scripting for puppet plays and creative drama.

Practicals

Infancy and Toddler hood

A file to be prepared to list activities appropriate for age groups – 0-6 months, 7-12 months, 13 to 20 months and 25-36 months.

Students be encouraged to observe materials available in the locally.

Develop play materials suitable for each age group.

List activities, which can be used for working with different age groups :

- (a). 0 – 6 months
 - Prepare materials and design activities for seeing, hearing touching and feeling.
 - Sensation and movement for soothing movements and exercises.
- (b). 7 – 12 months.

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Prepare materials and design activities for touching and feeling sensation and movement and manipulation.

- (c). 13 – 14 months
Identify activities for gross motor development and prepare play materials available in the locality.
Prepare play materials and list activities promote manipulation sensory experiences concepts and language.

Art Activities

- (a). A few suggestions are given under each category as guideline students be encouraged to explore experiment with each media and understand the characteristics of each medium.
(b). Samples of each be included in the resources in the resources file which each student technique used.
(c). Difficulty level of each activity be considered and decided its suitability for different age groups.
Painting and graphics.
Prepare a variety of brushes from different types of brooms, cotton, wool, strips of cloth, feather etc.
(d). Where necessary demonstration of preparation of materials required for conducting activity be included, i.e. paint with starch, paste etc. etching, blow painting, block painting, finger painting, Painting on wet paper, painting masks.
Drawing with crayons, dry and wet chalk.
6 to 8 years.
Wet paints, painting masks, brush music.

Tearing cutting and pasting

3 – 5 year.
Tearing with all fingers, tearing with thumb and tow fingers as used in holding pencil, tearing on straight line, curved line.
6 – 8 year
Tearing circular rings starting from one corner of the page till centre of page, making designs.
3 – 5 year.
Cutting and pasting
Cutting a design, pasting, please of paper, cloth, sticks leaves collage, glass pieces etc.
6 – 8 years
Tracing and cutting and designs, creating designs, pasting mosaic, paper balls, glass pieces etc.

Modelling

3 – 5 years
Modelling with clay, dough, Plasticine, saw dust, providing accessories.
6 – 8 years
Besides above medium, Modelling with straw, match stick rope, wire, thick paper role and slot sculpture.
Pasting papers on a balloon, when dry remove air and colour to create accessories for clay sculpture/crumbled paper pasting designs.

Printing

Printing with strings, leaf vegetable blocks, stencil printing, thumb, finger, spray painting.
Keeping coins, leaves with veins below paper and gently colouring with crayon.
Older children to make their own stencils.
Printing on large pieces of paper (group activity)
Decorating empty plastic bottles, boxes masks etc.

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Music and Movements.

Learning to sign rhymes songs with actions
Folks songs
Making simple musical instruments
Rhythmic body movements according to different beats and sounds.
Dancing according to rhythm.
Musical instruments from waste like old posts, tins, sticks.
Older children to form and orchestra.

Puppetry and Creative Drama

Puppetry stick, singer, table top, rhythm, puppets glove and cock puppets.
Learning basic manipulation skills
Use of music, voice modulation and sound effects.
Making sets and backgrounds
Scripting for short puppet plarp.
Creative drama
Body movements and co-ordination
Games like mirroring, blind fold and moving etc.
Theme based dramatization
Use of simple customers and make-up to enhance characterization e.g. use of eye make-up to show different emotions or simple cap's and paper clothes for characters).
Scripting simple dramatic presentation.

References :

Blackie, Pamela (1972) : Drama, London : MacMillan education.
Contractor, M. (1984) : Creative drama and puppetry in education, Delhi : national Book trust of India.
Currell, D. (1985) : The complete book of puppet Theatre, London : A and C. Black.
Garrestson, R. (1966) : Music in childhood education, New York : Meredith Publishing Company.
Hendrick, J. (1980) : Total Learning for the whole child, St. Louis : The C. V. Mosby.
Kaul, V. (1991) : Early childhood education programme, New Delhi : NCERT.
Lacper, S., Witherspoon, R., Day, B. (1994) : Good Schools for young children, New York : MacMillan Publishing Company.
Maxim, G. (1985) : The very young, Belnount, California : Wadsworth, Publishing Company.
Murlidharan, R. Asthana, S. (1991) : Stimulation activites for young children, New Delhi : NCERT.
Robinson, II. (1983) : Exploring teaching, London : Allyn and Bacon.
Swaminathan, M. (1984) : Play activities for young children, New Delhi : UNICEF

NUTRITIONAL ASSESSMENT AND SURVEILLANCE

Nutritional Status Assessment and Surveillance :

Meaning, need, objectives and importance.

Direct Nutritional Assessment of Human Groups :

Clinical signs, nutritional anthropometry, biochemical tests, biophysical methods.

Diet Surveys

Need and importance, methods of dietary survey. International – concept of consumption unit, intra and inter individual distribution in family. Adequacy of diet with respect to RDA, concept of family food security.

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Clinical Signs

Need and importance, identifying signs of PEM, vitamin A deficiency and iron deficiency anemia and iodine deficiency. Interpretation of descriptive list of clinical signs.

Nutritional Anthropometry

Need and importance, standards for reference of measuring height, weight, head, chest and arm circumference, interpretation of these measurements and use of growth chart.

Rapid Assessment Procedures – Need and importance, technique, interpretation

Secondary Sources of Community Health data

Sources of relevant vital statistics, Importance of Infant, child and maternal mortality rates, Epidemiology of nutritionally related diseases.

Sociological Factors in the Etiology and Prevention of Malnutrition

Food production and availability, cultural influences, socio-economic factors, food consumption, conditioning infections, medical and educational services, psychosocial, emergency/disaster conditions e.g. famine, floods, war.

Practical :

Anthropometry

Measurement of infant length, height, weight, circumference measurements, head, chest, mid-upper arm, waist, hip, precautions to be taken. Accuracy, precision and reliability of measurements. Intra and inter observer variability and errors. Tools used and sensitivity.

Comparison with norms and interpretation to assess nutritional

Status (weight for age, height for age, weight for height, MUAC, - Z – scores, standard deviation, BMI, waist to hip ratio) and significance.

Test for body Composition – Methods in Brief and Significance

Measurement of fat using skin fold thickness.

Growth charts – Plotting of Growth charts. Growth Monitoring and Promotion

Clinical Assessment and Signs of Nutrient Deficiency for the following – PEM (Kwashiorkor, Marasmus), Vitamin A, Anemia, Rickets, B-Complex Deficiencies and iodine deficiency disorders

Biochemical Parameters commonly used for Assessing Nutritional Status

Norms and cut-off points for desirable, at risk/deficiency Proteins – total protein, albumin, transferrin, Hemoglobin, ferritin, TIBC, UIBC, plasma iron. Vitamins – Fat soluble and water soluble. Minerals, Lipids.

Estimating food and nutrient in take – Household food Consumption data, per consumption Unit, 24 hours dietary recall, 24 hour record

Weighment Method, food diaries, food frequency data. Use of each of the above, information available through each and situations in which each can be used, merits and limitations of each – Formulation of the tool, collection of data estimation of intakes.

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Field visits for surveillance systems used in nutrition and health programmes

Surveillance Systems

International, National, Regional and Community

References :

Jelliffe, D. B. (1966) :

Assessment of the Nutritional Status of the Community, World Health Organization.

Saln, D. R. Lockwood, R., Scrimshaw, N. S. (1981) : Methods for the Evaluation of the Impact of Food and Nutrition, Programmes, United Nations University.

Ritchie, J. A. S. (1967) : Learning Better Nutrition, FAO, Rome.

Gopalan, C. : Nutrition and Health Care, Nutrition Foundation of India. Special Publication Series.

Beghin, I. Cap. M., Dujardan, B. (1988) : A Guide to Nutritional Status Assessment, W.H.O., Geneva.

Gopaldas, T. and Seshadri, S. (1987) : Nutrition Monitoring and Assessment, Oxford University Press.

Mason, J. B., Habicht, J. P., Tabatabai, H., Valverde, V. (1984) :

Nutritional Surveillance, W.H.O.

THE CHILD WITH SPECIAL NEEDS

Introduction

Definition and terminology, relationship of delayed development and disability.

Incidence and prevalence in India.

The child at risk : poverty and gender issues.

Rights of the disabled child

Issues in classification and labeling

Genetic and environmental factors in disability

Prevention of disability

Early detection, screening, identification and assessment in the community and at centre – based programmes.

Need for intervention, education and rehabilitation.

Normalization and mainstreaming

Understanding the family with a special child.

The Child with Mental Retardation

Definition of intelligence, adaptive Behaviour and mental retardation, Approaches to measurement.

Mental Illness as different from retardation.

Current classification and terms : mild, moderate, severe and profound retardation.

Genetic and environmental causes; prevention.

Characteristics of children with mental retardation from infancy to adolescence – physical – motor, cognitive, language, personal – social and emotional. Effect on the family.

Family and Community : mutual support, role in development, attitudes acceptance and integration of child.

The Child with Sensory Deficits

Auditory impairment :

Definitions – deaf and hard – of – hearing children.

Classification – mild, moderate, Severe and profound loss

Conductive and sensor neural loss

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Genetic, prenatal and prenatal causes of deafness. Approaches to measurement – simple and clinical methods.
Cognitive, language, social and emotional development of children with hearing loss.
Importance of age of onset of loss for language development.
Communication in children with hearing loss.
Prevention, early treatment and stimulation.
Family – its role in detection and child's language development.
Supports and counseling for family.
Community – effect of attitudes, services for rehabilitation, integration of child and family.

Visual Impairment :

Definitions/blindness and partial sight. Legal and educational implications of definition.
Genetic and environmental causes – with special reference to nutrition.
Prevention and treatment of impairment.
Development of concepts in children from infancy to adolescence – significance of onset, early stimulation and mobility training. Motor, language and socio-emotional development. Sensitivity of other senses.
Family : role in detection and early stimulation. Support and counseling for family.
Community : role in prevention and awareness.
Services for rehabilitation. Integration of child and family.

The Child with learning Difficulties and Disability

Definition of learning Disability. Difference between difficulty and disability. Problems of labeling. Criteria for identification and diagnosis.
Characteristics of children –sensory – motor, perceptual, language difficulties. Consequences for school achievement.
Causes and correlates of learning disability. Learning difficulties as related to academic and psychological problems.
Profile of the learning disabled child at school and in the family. Parents dilemma in socializing the child.
Role of culture's expectations and family norms in seeking solutions.

The Child with Cerebral Palsy and Orthopedic Disability

Definitions, Classification and prevalence.
Causes and associated conditions. Prevention and treatment approaches.

TEXTILE HANDICRAFTS AND COMMERCIAL CLOTHING

1. - Preparation of utility articles by using following embroidery stitches :
Darning, running, chain, long and short, satin, herringbone patch work, cross stitch, interlacing stitch, fixing of mirror with buttonhole stitch.
- Creation of fashion accessories with zari work.
2. Preparation of a household article with quilting techniques.
3. Off – loom weaving techniques and tie use to prepare
 - Card weaving
 - Macramé work
 - Canvas work

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4. Carpet and durri making :
 - Preparation of yarn
 - Setting up of carpet loom
 - Weaving of one article.
5.
 - Preparing theme displays for festivals like Holi, Diwali, Christmas etc.
 - Price fixation of prepared handicrafts.
 - Exhibition cum sale of handicrafts
6. Visit to State emporia/Trade Fairs/Exhibitions
7. Techniques of garment designing through draping
8. Dress form and draping on dress form to prepare basic pattern
9. Alteration and grading of foundation pattern.
10. Decoration techniques, use of trimmings on garments
11. Fashion business; setup and functioning of boutiques
12. Retailing of fashion : departmental store, specialty store, mail order house, direct selling establishment, state emporiums.
13. Dress designer : qualities and responsibilities.

Practicals :

1. Method of taking body measurements of children and women, Calculation of average body measurements.
2. Preparation of foundation pattern for children and women by draping method.
3. Styling and construction of following garments with the use of suitable fabric and trimmings through draping technique.
 - Casual dress (Two)
 - Formal dress (Two)

POTTERY AND CERAMICS ARTS

1. Preparation of Pottery :
 - a). Study of shapes and forms in pottery designs and make.
 - b). making plain vessels of utility in coil techniques by use of clay
 - c). Preparation of decorated pottery in coil and mould techniques by use of clay.
 - d). Baking, finishing and painting the vessels.
2. Designing tiles :
 - a). Preparation of layouts for tile s (ceramic/mural)
 - b). Preparation of ceramic and mural tiles for kitchen, bathrooms and interiors.
 - c). Baking, and finishing.
3. Terracotta objects :
 - a). Making terracotta toys by the use of clay.
 - b). Making terracotta ornaments and Jewellery and utilitarian articles.
 - c). Baking, finishing and painting.
4. Paper-Mache :
 - a). Preparation of paper-Mache articles of utility.
 - b). Preparation of paper-mache masks, toys and sculptures.
 - c). finishing with paste and paints
5. Making sculptures in different media :
 - a). Clay

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- b). Wood
- c). Wax
- d). White cement

Reference :

1. Bromer and Horn : Art in Your World, U.S.A. Davis Publication, 1977.
2. Gerhard Collwitzere : Drawing From Nature, U. K. Sterling Publishing Co. 1970.
3. Frederick C. Johnstone : To Start Your Sketching, U. K. McMillan 1960.
4. Edward L. Mallil : Meaning in Crafts, J. N. Prentice Hall Inc. 1971.
5. Goldsmith : Art in Everyday Life, U.S.A. McMillan 1851,
6. Beitter and Lockhart : Desing for you, N. Y. John Wiley and Sons. 1969.

ADVERTISEMENT AND VISUAL PUBLICITY

Advertising Communication

Need for advertising communication; economic and social effects of advertising. Advertising as a mass communication process.
Advertising for commercial purposes.
Advertising for developmental programs.

Advertising Media

Different media for advertising – print media, newspapers and periodicals
Broadcast media – Television – Films
Non – media advertising
Outdoor advertisement – Hoardings, Posters, Billboard, Bulletin boards, Electronic signs, Litter bins, Aerial methods.
Transportation media (Mobile vehicles)
Exhibition and trade fair

Techniques of Advertising

Media planning – creativity
Choosing content – appealing
Layout and design
Ethics in advertising
Advertising code
Advertisement research

Advertisement for Development Communication

How to use the above advertisement media for developmental communication.

Reference :

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