

75

B. S. HOME SCIENCE

SCHEME OF EXAMINATION AND SYLLABUS

(Effective from 1988 admission onwards)

	Theory (3 hrs)	Practical (3 hrs)	Record	Total
Paper I FOOD SCIENCE AND MICROBIOLOGY	80	—	—	80
Paper II Elective :—				
(a) Sociology OR	60	—	—	60
(b) Extension Education OR				
(c) Principles of Psychology				
Paper III Family Resource Management	60	—	40	100
Paper IV Nutrition and Dietetics	60	60	40	160
Paper V Textiles and Clothing	60	60	40	120
Paper VI Human Development and Family Relations	60	—	20	80
Total	380	100	120	600

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I. B. Sc. HOME SCIENCE PAPER I
(Food Science and Microbiology)

Marks: 40 + 40 = 80

A. Food Science

(2 hours per week)

Theory
Objectives

1. To study about foods — structure and nutritive composition
2. To Know about the basic five food groups and the nutritive contribution of each.
3. To know about methods of food preservation, methods of cooking and food sanitation.

Syllabus

1. Functions of food.
2. Basic five food groups — Basis and Use
3. Study of foods :—
 3. (a) Cereals:
 1. Structure and nutritive composition
 - (a) Wheat
 - (b) Rice
 2. Commonly used cereals and cereal products.
 3. Processing of Rice

Parboiling—Parching—Flaking Milling and Handpounding
Washing and cooking
 4. Storage of Cereals
 5. Hybrids
 3. (b) Pulses:
 1. Common Pulses used in India
 2. Nutritive value of pulses
 3. Processing of pulses

Sprouting — Fermentation — Cooking
 4. Lathyrism

3. (c) Nuts and Oils Seeds:

1. Nutritive value
2. Protein foods for infants and children

3. (d) Milk and Milk products:

1. Nutritive composition
2. Structure
3. Processing of Milk .
Pasteurization - Boiling - Coagulation - Fermentation
4. Milk products (Curd, Buttermilk, Butter, Ghee, Cheese, Whey, Skimmed milk, toned milk, condensed milk, Malai, Khoa (mawa))

3. (e) Vegetables:

1. Classification
2. Nutritive value
3. Vegetable pigments
4. Vegetable Cookery
5. Selection and Storage

3. (f) Fruits:

1. Nutritive value
2. Changes during ripening
3. Darkening of fruits
4. Preservation

3. (g) Eggs:

1. Structure
2. Nutritive composition
3. Digestibility
4. Characteristics of fresh eggs.
5. Deterioration of eggs.
6. Preservation
7. Culinary roles
8. Eggs cooked in shell.

3. (h) Meat:

1. Varieties of meat
2. Structure of meat
3. Nutritive composition
4. Effect of cooking
5. Tenderness of meat

3. (i) Fish:

1. Classification
2. Selection
3. Cooking
4. Shell fishes

3. (j) Fats and Oils:

1. Definition
2. Smoking temperature
3. Rancidity
4. Selection and care of fats and oils
5. Functions of fat in food preparation

3. (k) Beverages:

1. Stimulating — Nonstimulating — miscellaneous

3. (l) Spices:

4. Methods of cooking
5. Food sanitation and hygiene
6. Food preservation

Practicals

Objectives :

1. To learn about measurements - how to make measurements and the relationship between weights and volumes of food stuffs.

2. To have an understanding of the ratio of raw to cooked volumes of different foodstuffs.
3. To learn about different procedures used in cooking.
4. To be acquainted with the terminology and techniques used in cooking.
5. To develop hygienic habits as related to personal hygiene as well as working areas in the kitchen.
6. To learn to handle foodstuffs without waste.
7. To learn to work out cost and nutritive value of recipes.

Syllabus

1. Record the weight of 1 cup / 1 tsp / 1 tsp of different types of foodstuffs.
2. Record the ratio of raw to cooked volume of Rice, Rava, Dal, Potato, Beans and Amaranth.
3. Record the ratio of raw to cooked weight of meat and fish.
4. Food preservation — pickles, jam, squash.
5. Demonstration on :
 - (a) Effect of acid and alkali on vegetable pigments.
 - (b) Methods to prevent darkening of fruits
 - (c) Stages of sugar cookery.
6. Food preparation :— Main Dishes, side dishes, snacks, desserts, etc., using cereals, pulses, milk, vegetables, fruits, egg, meat & fish.

[Record work of the students should be submitted at the end of final year B. Sc.

No practical examination in first year B. Sc.]

B. MICROBIOLOGY

(2 hours per week)

- 1 Study of Micro organisms : Introduction, development and classification of micro organisms.
- 2 Bacteria : Morphology - structure, shape size, Physiology - Motility, reproduction, cell grouping spore formation, factors affecting growth.
- 3 Cultivation, Isolation and Identification of Bacteria : Types of media inoculation, incubation, types of culture. Inoculation of culture media. Isolation-streak plate and pour plate methods, Identification - Examination of organisms in the living condition. Hanging drop preparation. Staining techniques Simple staining and differential staining-Gram staining, Acid fast staining, staining of spores, capsules and flagellal Cultural characteristics, biochemical reactions, seriological tests, animal inoculation.
- 4 Control and destruction of bacteria : Sterilization-heat, light; electricity, desiccation, filtration, sedimentation, Disinfection - Acids, alkalies, salts, Halogens, phenols, dyes, oxidising agents, detergents, sulphonamides.
- 5 Infection : Sources, Factors influencing infection transmission of infection. Types of infection.
- 6 Resistance and Immunity : Natural defences of the body-primary and secondary defences of the body Natural and acquired immunity - Active and passive immunity. Use of drugs such as Sulpha and anti-biotics, allergy, hypersensitiveness.

- 7 Bacteria in relation to disease : Pneumonia, Meningitis, gonorrhoea, Syphilis, tuberculosis, leprosy, diphtheria, tetanus, typhoid, cholera, plague, whooping cough.
- 8 Yeasts : Morphology, economic importance.
- 9 Moulds : Morphology and economic importance of Mucor, Rhizopus, Aspergillus penicillium.
- 10 Protozoa : Morphology - Protozoal diseases like amoebic dysentery, malaria, sleeping sickness, Kala-azar, Leishmaniasis.
- 11 Viruses : Morphology and reproduction, Bacteriophages. Viral diseases like small pox, chicken pox, measles, german measles, mumps, poliomyelitis, rabies, influenza, common cold, yellow fever, infective hepatitis.
- 12 Microbiology of soil : Sources and kinds of organisms. Nitrogen cycle, Nitrogen fixation.
- 13 Microbiology of Sewage : Sources and kinds of organisms. Sewage treatment.
- 14 Food Microbiology : Milk, fish, meat, egg. Food spoilage, food preservation, food poisoning.
- 15 Microbiology of water : Sources and kinds of organisms. Tests for sanitary quality, purifications.
- 16 Microbiology of Air : Sources and kinds of organisms, methods of studying the organisms, Prevention and control of organisms.

II B. Sc. HOME SCIENCE PAPER II

(Elective) 4 hours per week

(Marks: 60)

- (a) Sociology —
- (b) Extension education
- (c) Principles of Psychology
- (d) Health Science

(a) Sociology

1. What is Sociology? Its relation to other social sciences. Its Value in Home Science
2. Man's relation to Society — Definition of Society - Theories of Society.
3. Origin and evolution of Society from the primitive to the modern.
4. Social stratification - social structure. Social groups — primary and secondary, their significance in the development of the individual, social control methods, their value.
5. Social Institutions
 - (a) The Family — Joint family, matriarchal and patriarchal families — forms of marriage, marriage customs, Population problems in India, population explosion — Its impact on the individual and family. Its impact on a social, economic health and cultural aspects - the small family norm.
 - (b) The Community - Religious Groups
 - (c) Political Institutions — Citizenship, rights and duties local self-governing bodies — essentials of democratic forms of Governments - aims of a welfare state - five year plans.
6. Social change - factors influencing social changes - changes in modern India Cultural lag theory.
7. Social evils and customs and their removal - caste prejudices, untouchability, disability of women in India, status women in Kerala.
8. Legal aspects of the family - laws of marriage -- succession, inheritance and adoption. How to draw up a will.
9. Social welfare institutions — voluntary organisations, institutions for the physically handicapped, juvenile delinquents, mentally defective, orphanages -- Home for the aged.

- 10 Village and urban life in India — rural and urban problems, rural reconstruction, community development programmes — town and community housing — effects of industrialisation slum clearance.

(b) EXTENSION EDUCATION

- 1 Origin history, objectives and organisation of the Community Development and extension services in India and abroad.
- 2 A review of the Government of India's Five Year Plan in relation to the objectives of community development and extension schemes.
- 3 The Block set up — its functions, its methods of working, its internal organisation and its relation to the community it serves.
- 4 The role of the Gram Sevak and Gram Sevika in relation to the community. What should be his/her abilities and his/her training?
- 5 Extension training its objectives — organisation and set-up of different training centres — those which train village level workers, social workers and Mukhya Sevikas.
- 6 Extension, training methods.

(a) Basic principles

- 1 Need to respect the individual
- 2 Need to start with felt needs
- 3 Need to pool and to make use of local resources
- 4 Need to develop the people's own ability, ideas etc.

(b) Programme development.

Initial survey of village needs — methods of meeting them, drawing up concrete plans, long term and immediate plans.

(c) Extension teaching or field work

- 1 Mass, group and individual contacts
- 2 Discussions
- 3 Demonstration and exhibitions
- 4 Tours and excursions
- 5 Literature, radio, lectures, newspapers

7 Special aspects of extension education

- a The family approach
- b Development of local leadership
- c Importance of co-ordination at local, district, state and national level
- d Small saving schemes
- e Co-operative Societies
- f Research

List of reference books:

- 1 McCollum, E. V. Orent Keils and Day G. Harry, the Newer knowledge of Nutrition McMillan, 1939.
- 2 Cooper Barber, Mitchel, Rynbergen, Greens, Nutrition in Health and Diseases, Lippincott, 1963
- 3 Wilson, E. D. Fisher, K. H. and Fuqua M. E. Principles of Nutrition, John Wiley and Sons 1964
- 4 Proudfit and Robinson. Normal and Therapeutic Nutrition, Calcutta, Oxford and IBH Publishing Co., 1967.
- 5 Davidson, S. Meikelejohn. passmore R Human Nutrition and Dietetics, Baltimore: Williams and Wilkins 1959. (Ind. Edn)
- 6 Aykord W. R. The Nutritive value of Indian Foods and planning of satisfactory diets. 6th edition, New Delhi, Indian Council of Medical Research 1969
- 7 E. W. McHenry, Basic nutrition. J. B. Lippincott Co., 1957.
- 8 Claria, Mac Taylor and Orrea, Florence, Pye, Foundations of Nutrition.
- 9 V. N. Patwardhan, Nutrition of India. The Indian Journal of Medical Science, Bombay-4, 1961
- 10 Marie V. Krause Food, Nutrition and Diet Therapy (3rd Edn.) Macmillan 1966.
- 11 Henry c. Sherman, Chemistry of Food and Nutrition (8th Edn.) Macmillan 1966.
- 12 Essentials of food and nutrition Vol. I & II by Swaminatha N. Ganesh & Co. Madras.
- 13 Practical clotting construction - Part I - Basic Sewing Processes by Mary Mathew, Lecturer in Home Science, SIFET Women's College, Madras.
- 14 Microbiology by Anna K. Joseuw.

(C) PRINCIPLES OF PSYCHOLOGY

I. Definitions and scope of Psychology.

- Definitions of psychology.
- Branches of psychology
- Schools of psychology.
- The values of psychology.

II Methods of Research in psychology.

- Growth of scientific psychology.
- The methods of psychology :- Descriptive methods, experimental method, statistical methods.
- Standardization of tests.

III. Physiological Basis of Behaviour.

- The Nervous System.
- Localization of Brain Functions.
- Endocrine glands.

IV. Sensations

- Vision :- The light stimulus, the eye, day and night vision adaptations, after images, visual activity, colour vision, colour blindness.
- Hearing :- The ear, sound stimulus, frequency and pitch, intensity and loudness, deafness.
- The chemical senses :- Taste and smell.
- Cutaneous sensation.
- Proprioceptive sense :- Kinesthetic sense, vestibular sense
- Measurement of sensations :-
Thresholds, psychophysical methods.

V. Attention and perception

1. Attention

- Nature and importance of attention.
- Factors determining the selection of the stimuli (objective and subjective factors)

- c) Shifting of attention.
- d) Kinds of attention.
- e) Span of attention.
- f) Distraction and inattention.
- g) Losing of attentive power.
- h) Measurement of attention.

2. PERCEPTION:

- a) Nature of perception.
- b) Object perception. :- figure ground perception, grouping, closure.
- c) Perceptual constancies :- shape, size and brightness constancy.
- d) Depth perception :- monocular cues, binocular cues, conflicting cues.
- e) Motion perception :- stroboscopic movement, induced movements, real movements.
- f) Influences on perception.
- g) Errors in perception, kinds of illusions.

VI. HUMAN LEARNING AND MEMORY.

1. HUMAN LEARNING.

- a) Different kinds of Learning.
- b) Methods of Learning.
- c) Strategies of learning (spaced versus mass practice, reading versus recitation, whole versus part learning, knowledge of results)
- d) The learning material (perceptual distinctiveness, Associative meaning, conceptual similarities, conceptual hierarchies, Associative hierarchies)
- e) Influences on learning :- Intelligence, age, arousal and anxiety, transfer of previous learning.
- f) Learning curve, plateau.

2. MEMORY -- REMEMBERING AND FORGETTING

- a) *Types of memory*
- b) *Factors affecting memory*
Potential, Depth, Intensity
- c) *Memory span and preservation.*
- d) *Why we forget?*

VII. THINKING AND PROBLEM SOLVING

- The thinking process:— Elements of thinking.
- Concept learning:— Methods, aids and meaning in concept learning.
- Problem solving:— Stages, individual factors, reasoning.
- Creative thinking.

VIII. DRIVES AND MOTIVATION

- The nature of motivation:— Positive and negative goals learned goals, unconscious motivation.
- Primary motives.
- Social motives.
- Socialization of motives.

IX. EMOTIONS

- What are emotions?
- Indicators of emotion: External indicators of emotions, physiological pattern of emotional responses.
- Emotional situations (Distinguishing among emotions)
- How emotions develop:— Early experimental findings, maturation and learning in emotional development.
- Feelings and emotions.

X. HUMAN INTELLIGENCE

- Definitions.
- Measurement of intelligence— Intelligence quotient, performance and verbal tests, group and individual testing.
- Distribution of IQ scores.
- Influences on intelligence and intelligence testing.

XI. PERSONALITY

- Definitions.
- The shaping of personality— Inherited predispositions, abilities, family influences, social influences, continuity of personality.

- c) Role of theories in studying personality.
- d) Coping behaviour : Repression, reaction formation, projection, rationalization, displacement, regression, sublimation and compensation.
- e) Assessment of personality.

XII. BEHAVIOUR DISORDER AND THERAPY

- a) Psychoneurotic reactions.
- b) Psychotic Reactions.
- c) Personality disorder.
- d) Psychotherapy.

XIII. Behavioural Inheritance.

- a) Species inheritance :- Instinctive behaviour, maturation of skills, readiness for learning.
- b) Individual inheritance :- Inheritance of physiological and psychological traits (intelligence, personality, emotionality).
- c) Environmental influences:-Rearing conditions, environmental impoverishment and environmental enrichment.
- d) Interaction of heredity and environment.

REFERENCE BOOKS.

1. Bhatia. H, R. General Psychology.
New Delhi. Oxford and IBH publishing Company.
2. Sperling A. Psychology made simple.
London, W. H. Allen & CO, Ltd.
3. Hilgard E.R. Introduction to psychology.
Harcourt Brace and World.
4. Baron R.A; : Psychology
Byrne D. Understanding
Kantowitz B. : Behaviour
Philadelphia; W.B. Saunders Company.
5. Ruch - F. L. Psychology and life.
New York; Scott, Foreman and Company.
6. Morgan, C. T. A Brief Introduction to Psychology;
New Delhi; Tata McGraw Hill Publishing Company.

7. Bourne L.E. and Ekstrand B. R.
psychology: Its principles and Meanings.
New york : Holt Rinchart. and winston.
8. Munn, N. N, L. Fornald, L. D, Fernald P. S. Introduction to
psychology. New Delhi: Oxford and IBH publishing Co.

III. B. Sc HOME SCIENCE. PAPER III.

FAMILY RESOURCE MANAGEMENT.

Theory : 60 Marks
Record : 40 "
Total : 100 "

(6 hours per week)

OBJECTIVES :

1. To orient students towards Home Science.
2. To provide students knowledge on household economics.
3. To help students learn principles of resoruces management.
4. To make students conscious of aesthetics.
5. To give students knowledge on housing and equipment.
6. To encourage students to apply theoritical knowledge in practical life in the cottage.

THEORY : 60 MARKS:

- A. Introduction to Home Science - meaning and components of Home Science.
- B. Principles of Resource management :
 1. Meaning of management.
 2. Definition of home management.

Steps involved in management, decision making, Philosophy, attitudes, values, goals and standards, practical examples role of home makers, qualities of home makers.
3. Management of home makers in the changing society.
Family life cycle - the beginning, the expanding and Contracting stages.

4. Resources:

- a) Definition and classification of resources.
- b) Management of energy.
Energy - types of fatigue, methods to overcome fatigue; work simplification - body mechanics, classes of change.
- c) Management of time: Tools in management of time. Steps in making time plan, utilisation of leisure time.
- d) Management of money:

FAMILY INCOME:

- i) Types of income - sources.
- ii) Income profiles.
- iii) Supplementing the family income - household production, subsidiary occupation, contributions made by family members.
- iv) Careers of women - full time and part time employment.

FAMILY EXPENDITURE:

- i) Family budget - types, items in the budget, steps in making family budget.
- ii) Engel's law of consumption.
- iii) Economics of household purchase.
- iv) Financial records of household.

C. HOUSING AND EQUIPMENT

1. Functions of house.
2. Owning versus renting - merits and demerits.
3. Selection of site.
4. Principles of planning a house
5. House plans for different income groups
6. Kitchen arrangements - types, principles, planning kitchens.
7. Storage in the house

8. Home lighting -- types of artificial lighting

9. Equipments for the home :

Electric and non-electric household equipment — Factors affecting selection, use and care of household equipment such as stoves, ovens pressure cookers, refrigerators, food mixers and coffee makers. Study of indigenous improvised equipment such as haybox, Janatha refrigerator, smokless chulah and solar cooker.

10. Household fuels ---

Classification, selection and conservation of household fuels — solid, liquid gas, electricity and solar energy.

D. PRINCIPLES OF INTERIOR DECORATION :

1. Design — definition, types of design, elements of design, principles of design

2. Colour — prang colour system, qualities of colour, colour schemes, use of colour

3. Furnishing,

a) Furniture, their selection and arrangement.

b) Soft furnishing, their selection and arrangement

i) Rugs and Carpets,

ii) Window treatment — types of windows, curtain styles, treatment of various problem windows

c) Accessories — Classification, functional and decorative, picture mounting, flower arrangements—types, principles and styles.

RECORD : 40 marks (based on neatness of work, Originality and relevance)

A. Principles of Resource management (5 marks)

1. Management of time:

Time plan for a college student - planning, carrying out and evaluation of time schedule for three consecutive days including a holiday.

2. Management of energy :
Determination of working heights for any four household activities and for storage in the kitchen.
3. Management of money :
planning a sample monthly family budget for a family,

B. Housing and Equipment (5 marks) :

1. Developing house plans for three different income levels
2. Planning a step - saving kitchen.
3. Study of the scientific principles of selected-
 - a) Modern kitchen gadgets (any one)
 - b) Indigenous equipment (any one)

C. Interior Decoration (10 marks) :

1. Types of designs
2. Elements of design—their application
3. Principles of design -- Illustrations
4. Prang colour wheel—qualities of colour, colour schemes, application of colour schemes.
5. Furniture arrangement in a drawing room, dining room and bed room.
6. Window treatment - types of windows - curtain styles, treatment of problem windows.
7. Accessories for various rooms.
8. Flower arrangement - basic shapes and any three Japanese styles.

D. Residence Course Report on one week's stay (20 marks)

1. External assessment for report (10 marks)
2. Internal assessment of management qualities (10 marks)
Criteria for evaluation:
Leadership, Co- operation, Understanding, punctuality, Imagination, Self control, skills & abilities, Cleanliness, Hospitality, Sociability.

SUGGESTED REFERENCES :-

1. Nickell, P. and Dorsey, J. M. management in Family living, Wiley Eastern private Ltd., New Delhi 1976.
2. Gross, I. M., and Grandall, D. W. management for modern Families 1973.
3. Graig, H. T. and Rush, C. D. Homes with Character. D. C, Heath and Company, Boston 1962.
4. Goldstein, H. and Goldstein, V., Art in Everyday life, Macmillan Company, New York, 1976.
5. Agan, T., The House and its plan and use, J. p. Lippincott Company, New York 1970.
6. Agarwall, A. N. Indian Economy, Vicas publishing Company, New Delhi 1976.
7. Faulkner, R. and Faulkner, S., Inside Today's Home Holt Rinchart and wonston.Inc. New York 1974.
8. West, Personal and financial management, Indian Book House, New Delhi 1970.
9. Ades Sally, Enjoy flower arranging. Faber and Faber 24 Russell Square, London 1964.
10. Sparnon, A guide to Japanese Flower Arrangement, Shufunotme Co. Ltd., Japan 1970.
11. Gordon, Economics for consumers.

III. B. SC. HOME SCIENCE.

PAPER IV. NUTRITION AND DIETETICS.

(7 hours per week)

A. Theory

OBJECTIVES :

1. To learn. about functions of food and the relation of food to health.

Theory : 60 marks.

Practicals : 60 marks.

Record 40 marks.

Total : 160 marks.

2. To study about Energy metabolism; the digestion and metabolism of CHO, Protein and Fat.
3. To have a thorough knowledge about the function, dietary sources and recommended allowances of the nutrients.
4. To acquire knowledge about deficiency diseases caused by lack of protein, energy, vitamins and minerals.
5. To be able to plan balanced diets for the various stages in the family cycle; to plan diets according to activity and income.
6. To be able to modify normal diets for therapeutic purposes.
7. To be aware of the international agencies engaged in improving health.

SYLLABUS

STUDY OF NUTRIENTS:

- (A) CHO: Classification - functions - Sources - Digestion and absorption - Metabolism.
- (B) FAT: Classification - functions - saturated and unsaturated fatty acids - PUFA content of edible fats and oils - Hydrogenation - essential fatty acids - digestion - Metabolism.
- (C) PROTEIN: Functions - classification - essential and non-essential amino acids - complete and incomplete proteins - digestion - metabolism (transamination, deamination, Decarboxylation) - Recommended allowances - sources and supplementary value of protein.
- (D) VITAMINS: History - functions - deficiency - sources - requirement.
- (E) MINERALS: Functions - deficiency - sources - requirement.
- (F) WATER: Functions - water balance (water intake and water excretion; oedema and dehydration) - water requirement.

2. STUDY OF ENERGY :

Body's need for energy - definition of calorie - determination of energy value of food by Bomb calorimeter - physiological fuel values - B.M.R. - factors influencing - Measurement of B.M.R. - Total Energy requirement and factors influencing - Estimation of energy requirements - FAO preference Man and Reference woman; Indian preference woman.

3. MEAL PLANNING :

- a) Principles of meal planning.
- b) Meal Planning according to activity and income.
- c) Planning diets at the various stages of the family cycle.

4. DIET THERAPY:

- a) Principles of diet therapy.
- b) Liquid diet, soft diet, bland diet.
- c) Diets in diseases of:
 - i) Alimentary canal - peptic ulcer, colitis, constipation; hepatitis, cirrhosis.
 - ii) Kidney - Glomerulo - Nephritis
 - iii) Cardiovascular system - Atherosclerosis, Hypertension
 - iv) Diabets mellitus
 - v) Allergy
 - vi) Anemia (Iron deficiency anemia; Megaloblastic anemia)
 - vii) Protein - Energy Malnutrition
 - viii) Over-nutrition
 - ix) Fever.

5. International agencies engaged in improving health,

REFERENCE BOOKS

- | | | |
|---------------------------------------|---------------------|---|
| 1. Handbook of Food and Nutrition. | M. Swaminathan | The Bangalore printing and Publishing Co. Ltd
88, Mysore Road,
Bangalore 560 018. |
| 2. Fundamentals of food and Nutrition | Mudambi & Rajagopal | Wiley Eastern Ltd. |
| 3. Clinical dietetics and Nutrition | F. P. Aptia | Oxford Univ. press. |
| 4. Human Nutrition | B.T. Burton | Tata Mc. Graw Hill Publishing Co. Ltd.
New Delhi. |
| 5. Basic Nutrition and Diet therapy. | C.H. Robinson | Macmillan publishing Company. |

PRACTICALS:

OBJECTIVES.

1. To be acquainted with the techniques of food analysis - quantitative and qualitative -
2. To acquire ability in the management of time and cost in meal preparation.
3. To be able to serve meals attractively.
4. To be able to plan, prepare and serve therapeutic meals.
5. To be familiar with the height - weight method of nutritional assessment.

SYLLABUS

(A) Preparation of weaning recipes, preschool snacks and therapeutic recipes.

(B) FOOD ANALYSIS:

1. Qualitative tests for: CHO, Protein, Vitamin A, Calcium Phosphorus and Iron.

2. Quantitative tests for:

- (a) Lactose content in milk
- (b) Vitamin C in food stuffs
- (c) Calcium in food.

(C) MEAL PLANNING:

i) TABLE SETTING

ii) NORMAL DIETS: planning preparing and

serving diets for :-

1. Preschool child
2. School going child
3. Adolescent
4. Sedentary adult man/woman
5. Labourer
6. Pregnant woman
7. Lactating Mother
8. Moderately active old man/woman.

iii) THERAPEUTIC DIETS

Planning, preparing and serving diets for:

1. Peptic ulcer, constipation.
2. Hepatitis, cirrhosis.
3. Acute glomerulo- nephritis
4. Hypertension, Atherosclerosis.
5. Iron deficiency anemia.
6. Diabetes mellitus.
7. Kwashiorkor.
8. Obesity.
9. Tuberculosis, Typhoid;

(D) HEIGHT - WEIGHT MEASUREMENT

Record your height and weight and score your general nutritional condition by comparison with standards.

(E) FIELD TRIPS:

1. Feeding programme,
2. Food Research Centre.

EVALUATION SCHEME FOR PRACTICAL EXAMINATION
IN NUTRITION AND DIETETICS

SECTION A	Food analysis	- 20 marks
SECTION B	Menu planning preparation and serving	} - 40 "
	Total	60 "

SECTION A — FOOD ANALYSIS

- (i) Quantitative analysis:-
- | | |
|-----------------------------|------------|
| Principle + procedure (3+7) | - 10 marks |
| Results | - 5 " |
| Calculation | - 5 " |
| | <hr/> |
| | 20 |

or

- (ii) Qualitative analysis:-
- | | |
|--------------------|-----------|
| Procedure | - 5 marks |
| Results | - 5 " |
| Inference | - 5 " |
| General conclusion | - 5 " |

Total 20

SECTION B

MENU PLANNING, PREPARATION & SERVING:-

1. Menu plan - 10 marks
2. Principles - 5 "

3. Palatability of prepared items	} 10 ..
4. Neatness of Working areas + Time management	} 5 ..
5. Calculation of Nutritive value	} 5 ..
6. Serving.	5 ..

Total 40 marks

G: Total 40+20 60 marks

III . B. Sc. HOME SCIENCE
PAPER V TEXTILES AND CLOTHING
(7 hours per week)

Theory : 60

Practical : 40

Records +

Garments : 10+10

Total : 120

OBJECTIVES:

- 1 To give the students an understanding of the production, properties and uses of fibers, yarns and fabric.
- 2 To develop the ability to know how to purchase fabrics and how to care for them.
- 3 To acquire the ability and skill of selecting and constructing clothing and other household articles.

THEORY

- 1 Classification of fibers.
 - (a) Definition of a fiber
 - (b) Properties- Physical and Chemical
 - (c) Classification
 - (d) Characteristics of each group of fibers in general

- 2 Production, properties and use of fibers, cotton, linen, silk, wool, rayon, acetate, nylon and polyester
- 3 Methods of Identification of fibers.
 1. Microscopic, 2. Burning, 3 Chemical, 4 Physical.
- 4 Process of making fiber into yarn.
 - a Spinning - Hand, Mechanical and Modern
 - b Definition of yarn
 - c Classification of yarn - type, size, twist, number of parts and novelty yarns.
- 5 Process of making yarn into fabric
 - a) Weaving - Loom, Parts, Operations and Preparation of yarn for weaving.
 - b) Weaves - Basic weaves - Plain, twill and satin
Fancy weaves - Pile, Leno, double cloth, Jacquard, dobby, lappet, clip, spot, crepe
 - c) Characteristics of woven fabrics
 - 1 Yarns - warp & weft
 - 2 Grain.
 - 3 Thread count
 - 4 Balance
 - 5 Selvages
 - 6 Width
 7. Properties
 - d) Other methods of making fabric, knitting, felting braiding, netting, lace making, bonding laminating.
- 6 Fabric finishes.

Definition, purpose, classification and types.

Singeing, bleaching, mercerizing, calendaring, shrinking, sanforizing, pulling, tentering, sizing, weighting, moireing, brushing, beetling, napping, schreinerizing, crepe and crinkled effect, crease resistance, water repelling, flame proofing, mildew proofing.
- 7 Dyer and dyeing:
 - (a) Classification of dyes: Direct, basic, acid mordants, natural, vat, sulphur.
 - (b) Methods of dyeing : Stock, yarn, piece and cross.
- 8 Printing methods : Block, roller, screen, resist discharge, spray, tie and dye, batik.

- 9 Selection of fabrics for :
- A. Household linen : Sheets, pillow cases, bed spreads, towels, table linen, curtains, blankets, rugs and carpets.
- B. Garments : Sarees, cholis, skirts, shirts, pants, childrens clothing.
- 10 Comparative study of ready made self made, and tailor made garments.
- 11 An introduction to Indian textiles and emboroideries.
- 12 Care of fabrics
- (a) Laundering - Water- hard & soft detergents
Bleaches
Blues
Stiffening agents
- (b) Laundering equipment
- (c) Laundering methods and stain removal
- (d) How to launder different kinds of fabrics
- (e) Mending - darning and patching
- (f) General storage of fabrics
- 13 Garment construction
- 1 Body measurements
 - 2 Methods of garments construction
 - 3 Steps in preparing fabric for construction
 - 4 Sewing equipment
 - 5 Sewing machine

PRACTICALS

- 1 (a) Collection of all the fibers studied
 - (b) Collection of all the weaves studied
 - (c) Collection of samples to show the different printing methods.
- 11 Identification of fibers by burning, microscopic, Chemical and the visual tests,

III General construction process:

- (a) Stitches - hand, decorative
- (b) Seams & Seam finishes
- (c) Bias & its application
- (d) Fullness - Gathers, tucks, pleats and darts
- (e) Finishing necklines
- (f) Sleeves - Set in, kimono, puff, reglan
- (g) Collars - Flat, straight, chinese
- (h) Plackets - Continuous, faced and bound
- (i) Hems
- (j) Fasteners

IV Construction of Garments:

Romper or sunsuit, Frocks, panty & slip
Saripetticoat, Choli, Top, nightie or house coat.

V Making articles of household linen-

Cushion Cover: or pillow cover or Table cloth or Table mat.

VI Knowledge of textiles available through-

Visits to shops & Mills,

SUGGESTED REFERENCES

- | | | | |
|---|--|-----------------------------------|------------------|
| 1 | Textiles | Hollen and Saddler
5th edition | Macmillan |
| 2 | Understanding Textiles | P. G. Tortora | |
| 3 | Modern Textiles | Lyle, D. S. | John Wiley & Son |
| 4 | Textiles for modern living | Goli & Vilensky | |
| 5 | Fundamental of Textiles and their care | Dantyagi, S. | Orient Longmen |
| 6 | Household Textiles and Laundry work | Deulkar, Durga | AtmaRam and sons |
| 7 | The standard hand-book of textiles | Newness, Butter worths | |

- 8 Masterpiece of Indian Textiles Mehta R. J.
- 9 Practical clothing construction Part I Mathews M
- 10 Handbook for clothing construction practicals Stratton and Ziffert

III. B. Sc- HOME SCIENCE

Paper VI- HUMAN DEVELOPMENT & FAMILY RELATIONS

(6 hours per week in third year B. Sc)

Objectives;

- 1 To provide scientific knowledge about children, their behaviour and development.
- 2 To orient the students for adjustment in the areas of marriage and parenthood and to equip them to take the roles of wife and mother effectively.
- 3 To make the student understand the importance of family interactions in the development of children.
- 4 To impart knowledge on the far reaching influence of child rearing.
- 5 To help the students to understand the problems of children and the methods to handle them.
- 6 To help the students to take care of exceptional children effectively.
- 7 To spark student interest in scientific studies in child development and behaviour.

A. HUMAN DEVELOPMENT

SYLLABUS:

- 1 History and scope of child psychology.
- 2 Methods used in studying children.
- 3 Importance of Heredity and environment in the development of the child.
- 4 Principles of growth and development factors influencing growth and development.

- 5 Parental development- Parental care- preparation for the arrival of the baby.
- 6 Neonate - characteristics, abilities and adjustments.
- 7 (a) Physical & Motor, Intellectual, emotional and social development of the child for the following developmental periods-Infancy, toddlerhood, pre-school period, childhood and adolescence
 - (b) Language development in children.
 - (c) Moral and religious development
Moral behaviour and moral concepts
Essential elements in learning morality
 - (d) Art, music and drama in childhood.
- 8 Play - Types and Values - Toys as educational tools - selection- of toys.
- 9 Discipline and guidance for children.
Need for discipline - Essentials in discipline - Techniques of discipline - Habit formation
- 10 Juvenile delinquency - causes and prevention.
- 11 Gifted and retarded children
 - (a) giftedness - identification and method of educating the gifted
 - (b) mental retardation - causes, classification - need and objectives of special education.
- 12 Pre-school education - objectives - organisation - Types of pre-schools

B FAMILY RELATIONS

- 1 Family - the basic institution, definition - functions-Role of each member of the family.
- 2 Types of families - merits and demerits of joint and nuclear families - causes of disintegration of joint family system, in India.
- 3 Sex education - its need - How to impart sex education to children.

- 4 Marriage - definition - preparation for marriage - emotional social and intellectual maturity - areas of adjustments - factors influencing good marital relationship - Laws pertaining.
- 5 Critical family situations affecting child development - infidelity - desertion - divorce, alcoholism, death - disabilities.
- 6 Preparation for responsible parenthood. Methods of Family Planning - Natural and artificial.
- 7 Parent's role in personality development of children-Parental attitudes.

PRACTICAL SYLLABUS

PRACTICAL WORK

Marks : 20

- I. Observation of the following developments in two nursery school children (a boy and a girl).
 - a) Physical development - Gross and fine muscular skills.
 - b) Social development.
 - c) Emotional development.
 - d) Intellectual development. (10 marks)
- II. Planning any three of the following creative arts for pre-school children.
 - a) Finger painting.
 - b) Sand painting.
 - c) Spray painting.
 - d) Collage.
 - e) Paper folding.
 - f) Drawing and painting (Brush)
 - g) Vegetable printing.
 - h) Rorschach.
 - i) Thread painting.
 - j) Any other. (5 marks)
- III. Visits to any two of the following places.
 - a) Creche/day care centre.
 - b) School for mentally retarded.
 - c) A nursery school/Balwadi. (5 marks)