

KURUKSHETRA UNIVERSITY, KURUKSHETRA
SYLLABUS FOR THE B.SC. HOME SCIENCE (SECOND YEAR)
w.e.f. 2012-13

SEMESTER – III

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Internal	
1.	201	Nutrition in Life Cycle Lab**	3 hrs.	40	10	50
2	202	Introduction to Clothing Construction Lab**	3 hrs	40	10	50
3.	203	Family Dynamics	3 Hrs.	40	10	50
4	204	House Hold Equipments & Consumer Protection Lab**	3 Hrs.	40	10	50
5	205	Community Development & Extension Education-I	3 Hrs.	40	10	50
						250
		Environment Science*				
		Computer Applications*				

Note: * The student will study this course along with B.Sc. students of Medical and Non Medical students as per the University rules.

**The Practical examination will be held in IV semester

B.SC. II (HOME SCIENCE)

SEMESTER - III
Nutrition in Life Cycle

Course No. : 201

Duration of Exam: 3 hrs.
MM: 40 + 10 = 50

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

Instructions for the Candidate : The candidate will attempt five questions in all, selecting at least one question from each unit as well as compulsory question.

Unit –I

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

Unit-II

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

LAB -

Foods and Nutrition

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

B.SC. II (HOME SCIENCE)

SEMESTER - III
INTRODUCTION TO CLOTHING CONSTRUCTION

Course No. - 202

Duration of exam: 3 hrs

M.M: 40 +10

= 50

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

Instructions for the candidates: The candidates will attempt five questions in all, selecting two questions from each unit and one compulsory question.

UNIT-I

- Basic Terminology used for clothing e.g. Fiber, Yarn etc.
- Equipments and supplies used in clothing construction, their maintenance, problems faced with specific reference to sewing machine.
- Parts of sewing machine and their functioning
- (a) Defects in sewing machine and how to overcome them.
- (b) Care of sewing machine.

UNIT-II

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

Lab-

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

References:

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

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

Family Dynamics

Course No. : 203

**Duration of Exam: 3 hrs.
MM: 40 + 10 = 50**

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

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

Unit-I

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

Unit-II

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

References:

1. Augustine, J.N. (Ed.) (1982): The Family in Transition ,New Delhi: Vikas publishing House.
2. Coleman,J.C.(1986): Intimate Relationships, Marriage and the Family, Chicago: Macmillan publishing Co.
3. Coser,Rose (1975): The Family: its Structure and Functions,New York: Macmillan Publishing Co.
4. Guppy. G. R. (1976): Family and social Change in Modern India, New Delhi: Vikas Publishing Co.
5. Gore,M.S.(1968): Urbanization and family Change IN India Bombay: popular prakashan.
6. Hutter,Mark (1981): The Changing family :comparative, new York: john Wiley& sons.
7. Srinivasan,K.and Mukerji,S.(Eds) (1987): Dynamics of Population and family Welfare ,Bombay: Himalayas publishing House .
8. Tiss(1994): Enhancing the Role of the Family as an Agency for Social and Economic Development,Bombay:TISS.
9. Augustine,J.S.(Ed)(1982): The Indian Family in Transition,NewDelhi:Vikas publishing house,
10. Chauhan,S.S (1993): Psychology of Adolescence New Delhi:Allied publishers.
11. Chowdhary,Paul D (1988): Youth Participation and development, New Delhi,Atmaram and sons .
12. Devadas T.S. (1979): Hindu Family and Marriage, Madras: University of Bombay.
13. M Desai,K.G.(Ed) (1989): ageing in India ,Bombay:tata Institute of Social Science .
14. Desai, N.and krishanraj,M.(1987): Women and Society in India ,Delhi: Ajanta publications,
15. Ehta, P. (1977): The Indian Youth ,Emerging Problem and issues, Bombay: Somalia Publication
16. NIPCCD (1994): Child in India: A Statistical Profile, New Delhi: NIPCCD
17. Randhawa, M.S. (1991): The Rural and Urban Aged, New Delhi: National Book Organization,
18. Saraswathi, S. (1991): Youth in India, New Delhi: ICSSR, Govt. of India
19. Sati, P.N. (1988): Retired and Ageing People, Delhi: Mittal publishers,
20. Sinha, J.M.P. (1989): Problems of Ageing, New Delhi: Classical Publishing Company.
21. TISS (1991): Research in Families with Problems in India, Volume I and II. Bombay: TISS.
22. TISS (1994): Enhancing the Role of Family as Agency for Social and Economic Development, Bombay: TISS.
23. UNICEF (1945): children and women in India: A Situation Analysis
24. Veeraraghavan, V. (1987): Rape: Victims of Rape, New Delhi: Northern Book Centre.

B.SC. II (HOME SCIENCE)
SEMESTER - III
House Hold Equipment & Consumer Protection

Course No. :204

Duration of Exam: 3 hrs.

MM: 40 + 10 = 50

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

Instructions for the Candidate : The candidate will attempt five questions in all, selecting at least one question from each unit as well as compulsory question.

Unit - I

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

Unit-II

- D Consumer- Definition, rights, responsibilities and problems
- E Consumer Protection – Laws, standards and agencies.
- F Buying and paying for goods and services
 - Cash buying, Credit buying and Approval buying
 - Contracts and Installment sales contract
 - Guarantees
 - Warrantees
 - Legal Problems

Lab

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

B.SC. II (HOME SCIENCE)
SEMESTER - III
Community Development and Extension Education - I

Course No 205

Duration of Exam: 3hrs.
MM: 40 + 10 =50

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

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

Unit-I

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

Unit-II

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

References:

1. Duran, J.(1978): Communication for rural Development ,London ,U.K, British Council.
2. Kuppuswani, B.(1989): Communication and Social Development in India,Bombay, Media Promoters and publisher Private Ltd.
3. Dahama,O.P. and Bhatnager, O.P.(1988): Education and Communication for Development,NewDelhi,Oxford and IBH publishing Co. Pvt. Ltd.
4. Malaviya, seema (1991): Communication for Rural Women, New Delhi,Monak Publications Pvt Ltd.
5. Saunders, Denys (1979): Visual Communications Handbook,U.K,Lutterworth.
6. UNICEF (1975): Communication with Pictures,monograph,Nepal,UNICEF.
7. Mcpherson,A.and Timms,H.(1988): The Audio –Visual Handbook,London,U.K.,Pelham Books.

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

KURUKSHETRA UNIVERSITY, KURUKSHETRA
SYLLABUS FOR THE B.SC. HOME SCIENCE (SECOND YEAR)

W.E.F. 2012-13

SEMESTER - IV

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Internal	
1.	211	Applied & Community Nutrition	3 hrs.	40	10	50
		Lab	3 hrs	50	-	50
2	212	Apparel Designing & Selection	3 hrs.	40	10	50
		Lab	3 hrs	50	-	50
3	213	Childhood and Adolescent Development.	3 Hrs.	40	10	50
		Lab	3 hrs	50	-	50
4	214	Family Resource Management	3 Hrs.	40	10	50
5	215	Community Development Extension Education-II	3 hrs	40	10	50
		Lab	3 hrs	50	-	50
6	216	Introductory Physics	3 hrs	40	10	50
		Lab	3 hrs	50	-	50
		Total				550
		Computer Applications*				

* As per university rules

B.SC. III (HOME SCIENCE)
SEMESTER - IV
Applied & Community Nutrition

Course No. :211

Duration of Exam: 3 hrs.
MM: 40 + 10 = 50

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

Instructions for the Candidate: The candidate will attempt five questions in all, selecting at least one question from each unit as well as compulsory question.

Unit –I

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

Unit-II

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

Lab

M.M: 50

Duration of Exam: 3 hrs

- Assessment of nutritional status of one family by using dietary and anthropometric methods
- Preparation of any 10 preserved products
- Preparation of 5 low cost nutritious recipes by using germination, supplementation and fermentation.

B Sc II(Home Science)
SEMESTER – IV
APPAREL DESIGNING & SELECTION

Paper – 212

Duration of exam: 3 hrs
M.M: 40 +10 = 50

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

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

UNIT-I

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

UNIT-II

Aesthetics in Dress: -

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

References:

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

A Drafting of sleeves and collars

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

B Construction of Children Garments (with drafting and layouts):-

- (a) Frock (any one) – A line/ gathered/ party
- (b) Night suit

C – Drafting Cutting and stitching of Blouse and Petticoat,

D – Darning – hole, edge and tear

Patching

Quilting

**B.SC. II (HOME SCIENCE
SEMESTER -IV**

Childhood and Adolescent Development

Course No. :213

**Duration of Exam: 3 hrs.
MM: 40 + 10 = 50**

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

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

Unit-I

A. Physical and Motor Development:

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

B. Basic emotional reactions: (joy, fear, jealousy, anger, sadness, aggression).
Milestones of emotional development through infancy to adolescence.

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

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

Unit-II

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

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

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

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

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

References:

1. Ambron. S.R. (1975): Child Development, Rinehart press San Francisco.
2. Sinha, D. (1981): Socialization of the Indian Child. New Delhi
3. Rao, P. and Rao, V.N. (1982): Marriage, the family and women in India, New Delhi: Vikas Publications.
4. Augustine, J.N. (Ed.) (1982): The family in transition, New Delhi: Vikas Publishing House
5. Lerner Hultsch (1983): Human Development: a life-span perspective, New York, Mc. Graw Hill Book Co.
6. Coleman, J.C. (1986): Intimate relationships, marriage and the family, Chicago, Macmillan publishing co.
7. Saraswathi, T.S. & Kaur, B. (1993): The development of children. New York: Scientific American books.
8. Cole, M.P. Cole, S. (1993): The development of children. New York: Scientific American books.
9. Gordon, I.J. (1975): Human Development New York: Harper & Row
5. Mussen, P., Conger, J.J. Kagan, J & Huston, A.C. (1945): Child Development and Personality, New York: Harper and Row
11. Srivastav, A.K. (1993): Child and adolescent Psychology: seminar readings New Delhi
12. Mangal SK (1988) General Psychology. Sterling Pub. Co New Delhi

B.SC. II (HOME SCIENCE)
SEMESTER - IV
Family Resource Management

Course No. : 214

Duration of Exam: 3 hrs.

MM: 40 + 10 = 50

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

Instructions for the Candidate : The candidate will attempt five questions in all, selecting at least one question from each unit as well as compulsory question.

Unit –I

Time Management

- Time as a resource
- Time demand during various stages of family life cycle
- Characters to consider in making time and utility plan.
- Steps in making daily and weekly time plan
- Control of time plan
- Evaluation of time plan

Energy Management

- Relation of energy to the stages of the family life cycle
- Household tasks classified by energy costs
- Types of efforts
- Types of fatigue and the various ways to overcome fatigue
- Management of energy (Planning, Controlling and Evaluating)
- Work simplification
- Techniques of work simplification

Unit –II

Money Management

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

A. Marketing – definition and concept.

B. Factors affecting consumer decision in the market, good buy man ship.

References:

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

B.SC. II (HOME SCIENCE)
SEMESTER - IV
Community Development and Extension Education -II

Course No 215

Duration of Exam: 3hrs.

MM: 40 + 10 =50

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

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

Unit-I

Community Development:

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

Unit-II

Extension Education

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

Lab

M.M: 50

Duration of Exam: 3 hrs

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

References:

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

B.SC. II (HOME SCIENCE)

SEMESTER - IV Introductory Physics.

Course No. : 216

Duration of Exam: 3 hrs.
MM: 40 + 10 = 50

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

Instructions for the Candidate : The candidate will attempt five questions in all, selecting at least one question from each unit as well as compulsory question.

Unit-I

Introduction to properties of matter

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

Mechanics

- (a) **Units and Measurements:** Concepts of measurements and units of length, mass and time in CGS, MKS and British systems and their interrelationship
- (b) **Simple machines:** Lever (Definition & Types), Equipment working on the principle of lever (Pulley, Scissors, Egg Beater, Nut Cutter).

(c) **Friction:** Friction Advantages and disadvantages, concepts of ball bearing, sewing floor, scrubbing machines.

(d) **Centripetal and centrifugal forces:** spin dryer in washing machine.

Unit- II

Heat

(a) **Introduction to heat:** Unit of Heat, Sources and properties of heat, heat and temperature, heat transfer, humidity, relative humidity and dew point.

(b) **Application of heat transfer:** Household thermometers, pressure cooker, vacuum coffee maker.

(c) **Refrigeration:** structure of refrigerator and its working.

Sound

(a) **Production and propagation of sound:** Wave length, frequency, amplitude phase, velocity of sound in air, solids and liquids.

(b) **Reflection of sound:** Echo, reverberation, sound in auditorium.

Household Electricity (a) Elementary Knowledge of Electricity: Electric Current (AC & DC), Ohm's Law, Resistance, Sources of electricity (AC Generator & DC Generator, Dry Cell, Thermocouples)

(b) **Household electric wiring** - Electric meter, household electric wiring and safety features (Fuse, MCB, Earthing).

- Light equipment in the home - incandescent lamp, fluorescent tube lighting, C. F. L,
- Concept of energy conservation.

Lab

M.M.: 50

Duration of exam: 3 hrs

Section (A)

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

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

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

Section (C) Make any one Project

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

References

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