

**MAHARSHI DAYANAND UNIVERSITY, ROHTAK**  
**SCHEME OF EXAMINATION**  
**B.Sc. (Home Science) --Ist Semester**  
**( w.e.f. 2011-2012)**

Sr. No.	NAME OF THE PAPER	MARKS	INTRNAL ASSESSMENT	PERIODS/WEEK
101	ENGLISH LANGUAGE AND COMMUNICATION SKILLS - I	40	10	3
102	APPLIED CHEMISTRY	40	10	3
	PRACTICAL	25	-	3
103	HUMAN PHYSIOLOGY	40	10	3
	PRACTICAL	25	-	2
104	INTRODUCTORY CLOTHING	40	10	4
	PRACTICAL	25	-	3
105	HYGIENE AND PUBLIC HEALTH	40	10	3
106	BASIC FOODS	40	10	4
	PRACTICAL	25	-	3
<b>B.Sc. (Home Science) -- IInd Semester, w.e.f 2011-2012</b>				
201	ENGLISH LANGUAGE AND COMMUNICATION SKILLS - II	40	10	3
202	APPLIED PHYSICS	40	10	3
	PRACTICAL	25	-	3
203	HUMAN DEVELOPMENT-I	40	10	3
	PRACTICAL	25	-	2
204	INTRODUCTION TO TEXTILES	40	10	4
	PRACTICAL	25	-	3
205	APPLIED BOTANY	40	10	3
206	FUNDAMENTALS OF NUTRITION	40	10	4
	PRACTICAL	25	-	3
<b>B.Sc. (Home Science) -- IIIrd Semester, w.e.f. 2012-2013</b>				
301	EXTENSION EDUCATION AND RURAL DEVELOPMENT	40	10	3
	PRACTICAL	25	-	2
302	HUMAN DEVELOPMENT-II	40	10	3
	PRACTICAL	25	-	2
303	PSYCHOLOGY-I	40	10	3
304	INTRODUCTION TO HOME MANAGEMENT-I	40	10	4
305	LAUNDRY SCIENCE AND FINISHING FABRICS	40	10	4
	PRACTICAL	25	-	3
306	CONSUMER ECONOMICS	40	10	3
307	FOOD SCIENCE-I	40	10	4
	PRACTICAL	25	-	3

<b>B.Sc. (Home Science) --- IVth Semester, w.e.f. 2012-2013</b>				
401	COMMUNITY DEVELOPMENT AND COMMUNICATION	40	10	3
	PRACTICAL	25	-	2
402	HUMAN DEVELOPMENT-III	40	10	3
403	PSYCHOLOGY-II	40	10	3
404	INSTITUTIONAL FOOD MANAGEMENT	40	10	3
405	GARMENT CONSTRUCTION AND APPAREL SCIENCE	40	10	4
	PRACTICAL	25	-	3
406	INTRODUCTION TO HOME MANAGEMENT-II	40	10	4
	PRACTICAL	25	-	3
407	FOOD SCIENCE-II	40	10	4
	PRACTICAL	25	-	3
<b>B.Sc. (Home Science) -- Vth Semester, w.e.f. 2012-2013</b>				
501	FAMILY DYNAMICS	40	10	3
502	CHILD CARE & REARING PRACTICES	40	10	3
	PRACTICAL	25	-	2
503	NUTRITIONAL BIOCHEMISTRY-I	40	10	4
	PRACTICAL	25	-	3
504	COMMUNITY NUTRITION	40	10	3
	PRACTICAL	25	-	2
505	INDIAN TEXTILES	40	10	4
	PRACTICAL	25	-	3
506	INTERIOR SPACE DESIGNING	40	10	4
	PRACTICAL	25	-	3
507	NORMAL NUTRITION	40	10	4
	PRACTICAL	25	-	3
<b>B.Sc. (Home Science) --- VIth Semester, w.e.f. 2012-2013</b>				
601	WOMEN EMPOWERMENT	40	10	3
602	CHILD WELFARE	40	10	3
	PRACTICAL	25	-	2
603	NUTRITIONAL BIOCHEMISTRY-II	40	10	4
	PRACTICAL	25	-	3
604	FOOD MICROBIOLOGY	40	10	4
605	APPAREL DESIGNING	40	10	4
	PRACTICAL	25	-	3
606	INTERIOR DESIGNING	40	10	4
	PRACTICAL	25	-	3
607	THERAPEUTIC NUTRITION	40	10	4
	PRACTICAL	25	-	3

**B.Sc. HOME SCIENCE -- Semester I (w.e.f. 2011-2012)**

**English Language and Communication Skills -I**

Course No. 101

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.....

Time :3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

**Unit - I**

The following poems from *The Chronicles of Time* edited by Asha Kadyan (Oxford University Press):

- a) “Let Me Not to the Marriage of True Minds” by William Shakespeare
- b) “Death Be Not Proud” by John Donne
- c) “On His Blindness” by John Milton
- d) “Shadwell” by John Dryden
- e) “Know Then Thyself” by Alexander Pope

**Unit – II**

**Phonetics:** Introduction to the Sound System of English: Phonetics Symbols, Organs of Speech, Transcription of Words ( Oxford Advance Learners’ Dictionary by Hornby to be followed).

**Unit – III**

**Grammar:** Parts of Speech, Types of Sentences, Common Errors

**Unit – IV**

Technical Writing(application writing, business letter ).

**References:**

*High School Grammar* by Wren and Martin.

*Remedial English Grammar for Foreign Students* by F.T. Wood.

*Essentials of Communication* by D.G.Saxena, Kuntal Tamang (Top Quark)

### Applied Chemistry

Course No. 102

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

#### Unit-I

1. Concept of element, mixture and compound, atomic and molecular masses, mole concept and molar masses, Normality, molarity and mass percentage. Simple numerical problems based on them.
2. Subatomic particles : Electrons, Protons and Neutrons, Atomic No., Atomic weight, Bohr's model of an atom.

#### Unit-II

1. Modern periodic law and periodic table, Electronic configuration of elements (Na, Mg, C, N, O, F, Cl, H ). Periodic properties : Atomic size Ionisation energy, electron affinity and electronegativity. Chemical Bonding : Ionic, Covalent , coordinate, H bonding.
2. Concept of Acids, Bases and salts, pH and pOH scale. Numericals based on pH .Buffer solutions.

#### Unit – III

1. Carbon and its characteristics – Tetravalency catenation, isomerism, electronegativity, Tendency to form multiple bonds, organic compounds, classification of organic compounds, functional groups, IUPAC nomenclature of Aliphatic compounds (alkanes, alkenes, alkynes, alcohols, carboxylic acids, aldehydes and ketones). Classification of Carbon atoms in alkanes.

#### Unit-IV

1. Soaps and synthetic detergents, advantages and disadvantages.
2. Synthetic polymer : Structure and uses of the following polymers (PVC ,Teflon, PAN, Nylon-6, 6 polyester )
3. Chemical composition in cosmetics – creams , perfumes, talcum powder, deodorants, lipsticks, nail polish, shampoo and hair dye.  
Paints and varnishes their composition and uses.

#### **References**

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

#### Practical

M.M: 25  
Periods/wk.: 3  
Time: 3 Hrs.

1. Preparation of solutions (Normal / Molar) sodium hydroxide, sodium carbonate and hydrochloric acid.
2. Preparation of crystal of copper sulphate and potassium alum.
3. To determine the normality and strength of given sodium hydroxide solution by volumetric titrations using phenolphthalein as an indicator.
4. To determine the normality of the given HCl solution by titrating it against standard sodium carbonate solution using methyl orange as an indicator.

## Human Physiology

Course No. 103M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk. ....

Time : 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit - I

1. Cell Biology – Animal cell structure.
2. Cardiovascular system – Blood and its composition, Blood groups, coagulation of blood, structure and functions of heart, blood pressure and its regulation.

### Unit-II

1. Skeletal System – Functions, names and number of different bones, joints of skeleton their names with examples.
2. Digestive system – structure and functions of various parts of alimentary canal Digestion and absorption of food. Functions of liver, pancreas and salivary glands.

### Unit-III

1. Reproductive system – Structure of reproductive organs in a women, menstrual cycle, physiology of pregnancy parturition, lactation and menopause.
2. Nervous system – Structure and functions of brain , spinal cord and nerve cell.

### Unit-IV

1. Excretory system – Structure and functions of kidney , formation of urine, functions of skin, regulation of temperature of body.
2. Respiratory system – Structure of lungs mechanism of respiration and its regulation, O<sub>2</sub> and CO<sub>2</sub> transport in blood.

### **References**

1. Chaterzee (1988) Human Physiology, Calcutta , Medical agency.
2. Pears E.C (1988) , Anatomy and Physiology for nurses – Delhi oxford University, Press.
3. A text book of biology – Dhami and Dhami Pradeep Publications.
4. Gyton A.C., Hall , J.E 1996 : Textbook of medical physiology, 9<sup>th</sup> Ed, prism Books (Pvt) Ltd. Bangalore.

### Practical

1. Study of Human skeleton.
2. Blood Cells : Fresh mount and stained.
3. Determination of haemoglobin percentage in blood.
4. Coagulation of blood and blood grouping.
5. Measurement of blood pressure using sphygmomanometer.
6. To study human systems through charts & models.

M.M : 25  
Periods/wk.: 2  
Time: 3 Hrs.

## **Introductory Clothing**

Course No. 104

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk. ....

Time : 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **Unit- I**

Sewing

1. Equipment and tool for measuring , drafting , pinning marking, cutting and sewing.
2. Sewing Machine - Parts and functions, basic operations , defects and remedies, care and maintenance required.

### **Unit-II**

1. Principles of clothing construction.
2. A study of Anthropometric measurements, points to consider while taking body measurements,
2. Importance of taking body measurements and Important body landmarks.

### **Unit- III**

1. Preparation of fabric before cutting, pattern layout, pinning marking & cutting.
2. Calculation of the amount of fabric required for different garments.

### **Unit-IV**

1. Importance of clothing, sociological and Psychological aspects of clothing.
2. Selection of suitable fabrics according to climate, occasion, occupation, fashion & design.

### **References**

1. Baines , S. and Huttan, J. Singer sewing Book.
2. Doongaji , Basic process and clothing construction , 6ed. New Delhi, Raj Prakashan.
3. Dhantyagi, S, Fundamentals of Textiles and their care, 4<sup>th</sup>ed. New Delhi, Orient Long mans, 1983
4. Wingate, B Isable, Textile fabrics and their selection 7<sup>th</sup>ed. Engle wood Chilfit

### **Practical**

M.M: 25

Periods/wk.: 3

Time: 3 Hrs.

1. Sewing Techinques – Basic stitches, seams and seamfinishes , Disposal of fullness – gathers andpleats placket openings, finishing of necklines , fasteners.
2. Decorative embroidery stitches.
3. Taking body measurements.
4. Drafting and stitching of apron with patch pockets , child’s panty and bib.

## Hygiene and Public Health

Course No. 105

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk. ....

Time : 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit – I

1. Health – Definition.
2. Personal Hygiene-physical health, regular habits in daily living, eating and eliminating, cleanliness of body and different organs, rest and sleep, exercise & its importance.

### Unit –I

1. Infection—meaning of infection, communicable diseases, incubation period, mode of infection, prevention of infection.
2. Immunity – Definition and types of immunity, vaccination schedule (Triple vaccine, BCG, Polio drops etc.)

### Unit-III

1. Community water & waste management
2. Importance of water to community, sources of contamination, Household measures of purification of water, waste disposal – Sewage disposal & treatment, solid waste & liquid waste disposal.

### Unit-IV

- Infections diseases – Cause, Symptoms, mode of spread, treatment and prevention.
- i) Disease spread through food and water – Cholera, Diarrhoea, Hepatitis, Typhoid.
  - ii) Disease spread by insects – Malaria, Dengue.
  - iii) Disease caused by air – Chicken Pox, T.B
  - iv) Disease spread by contact and soil-leprosy, tetanus.
  - v) Sexually transmitted disease – AIDS, Syphilis, Gonorrhoea.

### **References**

1. Hygiene and preventive medicine – Yashpal Bedi
2. Home Management and Hygiene – Sweera Rehan, Dinesh Pub.
3. Textbook of Preventive & social medicine by Park & Park.

Course No. 106

**Basic Foods**

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk. ....

Time : 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

**Unit- I**

- a. Food – Definition and functions.
- b. Food groups and food guide pyramid
- c. Food Intake and regulation of hunger.

**Unit – II**

- a. Basic terminology used in food preparation.
- b. Cooking :
  1. Definition, Objectives and principles of cooking.
  2. Different methods of cooking , their advantages and disadvantages.

**Unit – III**

- a. Concept of Nutrition-Basic terms used in study of Nutrition.
- b. Enhancing nutritional quality of foods-germination, supplementation, substitution, fortification and enrichment.

**Unit-IV**

- a. Food adulteration, types of adulterants, adulterants in common foods.
- b. Pesticide residues in foods.
- c. Food laws and standards – PFA , Essential Commodities Act, FPO, AGMARK, BIS.

***References***

1. Srilakshmi , B. (2001). Food Science. New Age International Pvt. Ltd., New Delhi.
2. Manay N.S. and Shadaksharaswamy M. (2005) Foods facts and principles. Second edition . NewAge International (P) Ltd. , Publishers, New Delhi.

**Practical**

M.M: 25  
Periods/wk.: 3  
Time: 3 Hrs.

1. Controlling Techniques weights and measures , standard and household measures for raw andcooked foods.
2. Table setting and table manners.
3. Preparation of minimum two dishes each using common methods of cooking.
4. Preparation of food items by fermentation, and germination.



## English Language and Communication Skills –II

Course No. 201

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk. ....

Time : 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit – I

The following stories from the pointed vision: An Anthology of short stories By UshaBande and KrishanGopal (Oxford University Press, New Delhi)

- a. 'The Bet' by Anton Chekhov
- b. 'Gift of the Magi' by O Heney
- c. 'Three Questions' by Leo Tolstoy
- d. 'Under the Banyan Tree' by R.K. Narayan

### Unit – II

- a. Synonyms & Antonyms
- b. Prefix-Suffix
- c. Homophone & Homonyms
- d. One word substitution

### Unit-III

- a. Letter writing –formal& informal
- b. Developing writing skills through theme based paragraphs.

### Unit-IV

- a. Technical writing-E.mail writing, Reporting, Resume writing, Re-viewing T.V. Programmes.

### **References:**

*High School Grammar* by Wren and Martin.

*Remedial English Grammar for Foreign Students* by F.T. Wood.

*Essentials of Communication* by D.G.Saxena, KuntalTamang (Top Quark)

## Applied Physics

Course No. 202

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk. ....

Time : 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit - I

#### **1. Introduction to properties of matter**

- Properties of solids - a) Density , specific gravity , elasticity, hardness ,maleability,ductility.
- Properties of liquids :- Surface tension ,capillary action ,Archimedes principle, specificgravity of liquids.
- Properties of gases :- Elasticity , compressibility, atmospheric pressure.

### Unit – II

#### **2. Mechanics**

- Simple machines – Mechanical advantages , efficiency lever, screw pulleys, scissors,beaters.
- Friction :- Friction,advantages and disadvantages, concepts of ball bearing, sewing floorscrubbing machines.
- Centripetal and centrifugal forces, spin dryer in washing machine.
- Air appliances :-Vaccum cleaner.

### Unit-III

#### **3. Electricity**

- Static and current electricity.
- Basic electrical circuits ,units of electrical measurement ,ohm's law and parallel circuits.
- Thermal effect- Seebeck effect, thermoelectric thermometer, fuse circuit breaker, toaster,geysers hot plate, water heater, water boiler, steam iron.
- House wiring :- Transfer of energy from the powerpoint to home , kilowatt hour, Meter,distribution of current to the house, number of circuits in a house, methods of installingthe wiring circuits and switches.

### Unit – IV

#### **4. Heat**

- Introduction to heat :- Unit of heat, Source and properties of heat , heat and temperature,heat transfer, humidity, relative humidity and dew point.
- Application of heat transfer- household thermometers, pressure cooker, vacuum cleaner.
- Refrigeration :- Refrigerator , Compressor and absorpion type, cold storage plants.

### **References**

- Allison Anee :-Running your Home / management equipment.
- Avery Madelyn (1957) – Householdphysics, Macmillan company.
- Peet, L.J; Picket, M.S and Arnold M.G (1960) Household equipment, John wiley and sons Inc.,Newyork.
- NarcysAbraham ; Physics for modern times.

### **Practicals**

\_M.M. 25

Periods/wk. 3

Time 3 hrs.

1. To find out the volume of a given cylindrical body using vernier calipers.
2. To find out the diameter of a wire using screw gauge.
3. To find out the value of  $g$  using simple pendulum.
4. To find out the specific heat of solid.
5. Conductivity by simple method.
6. To verify ohm's law.
7. To verify the law of resistance in series and parallel.

## Human Development -I

Course No -203

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk. ....

Time : 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit-I

1. Human Development – Definition of growth, Development, difference between growth and development.
2. Principles of Development – Factors affecting development.

### Unit-II

1. Stages of Development.
2. Prenatal Development during three trimesters. various factors affecting prenatal development.

### Unit-III

1. Infancy(0-2 years)  
Physical characteristics of the neonate size, weight, height, body proportions, sensory capacities i.e. hearing, vision, taste, smell, touch, temperature and reflexes of a newborn.
2. Development tasks, milestone, physical development, motor, social, emotional development, motor, social, emotional cognitive. Factors influencing development.

### Unit – IV

Age group (2-6 years)

1. Development tasks, Physical, social, motor, emotional, cognitive, language.
2. Preschool orientation and significance. Factors affecting their development, Importance of play for all round development.

### ***References***

1. Berk L.E (1996) CHILD DEVELOPMENT , New Delhi, Prentice Hall.
2. Craif G. (1999) Human development.
3. Santrock J.W (1997) life span Development NY; Brown & Bench-mark.
4. Cole M & cole S (1995) The development of children NY freeman and Co.

### Practical

1. Developmental assessment of infants and preschoolers.
2. Observing relevant development in each of the following stages.
  - a) Infancy (Physical, Motor)
  - b) Preschool (Motor, emotional, social, parent child interaction, child-child interaction).
3. Collection of stories and rhymes for children of nursery school.
4. Constructing a game for a 5-6 years old child.
5. Activities for preschoolers.

M.M: 25  
Periods/wk.: 2  
Time: 3 Hrs

## Introduction to Textiles

Course No -204

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk. ....

Time :3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit-I

1. Textile fibres, characteristics, classification.
2. Manufacture, properties and importance to the consumer of the following fibres :-
  - a) Natural plant fibres – Cotton, Linen.
  - b) Natural animal fibres – Wool, Silk.
  - c) Man made and synthetic fibres – Rayon, Polyester, Polyamide and acrylic.

### Unit-II

Study of Yarn –

1. Basic Principles of yarn making -  
Types of yarns – simple, complex or novelty yarns.  
Properties of yarns – fineness and twist, yarn numbering.
2. Importance of blending, important blends and their properties.

### Unit – III

Fabric Construction –

1. Weaving – Parts of loom and its working.
2. Basic weavers (Plain, twill, Satin, Sateen weave and their variations).
3. Fancy weavers-Piles, dobby and Jacquard.  
leno, swivel, lappet.

### Unit-IV

1. Knitting-Technology, Types of Knit, advantages &disadvantage
2. Other methods-Knitting, Braiding, Felting and Bonding.

### **References**

1. Corbman BP (1985) Textiles fibre to fabric MC Graw Hill,.
2. Joseph M/L (1976) Essentials of Textiles holtripeniart of Winston, New york.
3. Wingate (1976) Textiles fabrics and their selection eagle wood cliffs (New Jeggery) Prentice Hall Ins.
4. Murray Rosenary (1981). The Essentials handbook of weaving, London Bell and Hyman Ltd.

### Practical

M.M : 25  
Periods/wk.: 3  
Time: 3 Hrs

1. Identification of through visual inspection microscopic, burning and chemical tests.
2. Sample collection for various textiles and weaves.
3. Basic stitches of knitting and following of knitting instructions, Making five samples.
4. To estimate the thread count of fabrics.

Course No. 205

**Applied Botany**

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk. ....

Time : 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

**Unit - I**

- 1) Introduction to home gardening.
- 2) Soil- structure, soil profile, components, different types of soil, tillage.

**Unit – II**

- 1) Principles and layout of kitchen garden, utilization of space by intense successive cultivation, crop rotation, role of microorganisms in soil fertility, inter- cropping, raising of healthy seedling.
- 2) Economic Botany – commonly used herbal and medicinal plants –Neem, Aloe vera, Tulsi, garlic ,ginger.

**Unit - III**

- 1) Lawn –planning and maintenance
- 2) Terrace gardening – its application in growing vegetables and ornamental plants in pot.

**Unit - IV**

- 1) Vegetative propagation by plants – cutting , layering and grafting ( with suitable examples ) tissue culture – its importance in plant breeding.

***References***

- 1) Gopalswamianger K. S.1991, Complete Gardening in India . M. S. Nagaraj and Co. Madras.
- 2) Bose T.K. and Soni, M.G. Vegetable Crops in India.NayaPrakash, Calcutta.
- 3) Kumar S. Home Gardening. Phoenix Publication New Delhi.1996.
- 4) Shreemali J. L. Economic Botany. KitabMahal, Allahabad.

## **Fundamentals of Nutrition**

Course No -206

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.....

Time :3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units. Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **Unit-I**

Definition, Classification, functions, sources, RDA, effects of deficiency and excess (in brief) of –

- A. Carbohydrates
- B. Proteins
- C. Lipids

### **Unit-II**

Lipids-Definitions, Classification, functions, source effects of deficiency and excess

Water- function & sources of water for human body, effects of excess and less intake of water on human body

### **Unit-III**

Functions, sources, RDA, effects of excess and deficiency ( in brief) of:

- A. Fat soluble vitamins – Vitamin A,D,E& K
- B. Water soluble vitamins – Vitamin C, B, B<sub>2</sub>, B<sub>6</sub>, B<sub>12</sub>, niacin and folic acid.

### **Unit-IV**

Functions, sources, RDA, effect of excess and low intake of –

A. Macro minerals – Calcium, magnesium, phosphorus, sodium and potassium

Micro Minerals – Iron,iodine and fluorin, fibre – Types, Functions or role of dietary fibre in the humanbody, sources.

### ***References***

1. Bamji, M.S. ;Rao, N.P. and Reddy V. (Editors) (1999). Textbook of Human Nutrition, NewDelhi.Oxford and IBH Publishing Co. Pvt. Ltd.
2. ICMR (1990) Nutrient Requirements and Recommended Dietary Allowance of Indians. A Reportof the Expert group of ICMR, NIN , Hyderabad.
3. Joshi, S.A. (2002). Nutrition and dietetics. (Second Edition) Tata McGraw Hill Pub Co. Ltd .
4. Srilakshmi, B. (2001) Nutrition Science New Age International Private Ltd. New Delhi.

### **Practical**

M.M: 25

Periods/wk.: 3

Time: 3 Hrs

Planning, Calculation and preparation of the following (2 each) – Energy, protein, Vitamin A, Iron,Calcium, Vitamin C, thiamin and fibre rich dishes.

## **B.SC. HOME SCIENCE --- SEMESTER III**

( W.E.F. Session 2012-2013 )

### **EXTENSION EDUCATION AND RURAL DEVELOPMENT**

*Course No. 301*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

#### **UNIT - I**

1. Concept of extension education- Meaning, principles, philosophy and objectives (Broad and specific)
2. Approaches of extension –Individual, group and mass approach
3. Qualities of extension worker
4. Role of extension worker

#### **UNIT -II**

1. Non-projected aids- Advantages and limitations
- 2 Role of extension education in- Agricultural development, Home Science extension

#### **UNIT -III**

1. Various rural and community development programmes like- IRDP, NREP, ICDS, TRYSEM , ANP, SNP
2. Programme planning- Definition, meaning of the programme, planning, steps in programme planning



#### **UNIT -IV**

1. Role of voluntary organization in rural development.
2. Role of Home Science in solving rural problems of illiteracy, poverty and poor health

#### **REFERENCES**

1. Rogers, Alan (1989); Teaching Methods in Extension Education for Development, Westwood Row, Tile Hurst, Reading RG 31 LT England, Woodmans.
2. Reddy, A.(1987): Extension Education, Bapatia, India, Sreelakshmi Press
3. Lynton, Rofit P. and Pareek, Uday (1967): Training for development, Homewood, Illworis, Dorsey Press.
4. Fetter, K. Clark, M. Murphy, C. and Walters, J.(1987); Teaching and learning with Visual Aids, London, U.K.,Macmillan.

#### **PRACTICALS**

M.M 25  
Periods/wk.  
Time 3 Hrs

- 1.Preparation of non-projected aids-chart, posters, leaflets, pamphlets, mobile, flash card.
2. Preparation of puppets as a media of communication, writing stories for puppets.
3. Visit to a village to see government and voluntary organizations in action.

#### **HUMAN DEVELOPMENT - II**

*Course No -302*

M.M (Theory) .. 40  
Internal Asses ... 10  
Periods/wk.  
Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **UNIT- I**

Late childhood years (6-12 years)

- 1) Developmental tasks, physical ,motor, social , emotional, cognitive development.
- 2) School- significance and functions, effects of success and failure .
- 3) Peer group – importance and function in life.

### **UNIT -II**

Early adolescence (12-16 years )

- 4) Definitions , Puberty- growth, primary and secondary sexual characteristics, Period of storm and stress, Early and late maturers . Parent child conflict.
- 5) Identity- definition, body image, positive and negative outcome (role confusion, ego identity).

### **UNIT- III**

6) Late adolescence (16-18 years )

Characteristics, physical, social, emotional, cognitive development, conflict with authority, choosing a career & factors influencing it.

### **UNIT- IV**

- 7) Influence of peers, accepting heterosexual relationships in late adolescence..
- 8) Adolescent Problems – Drug and alcohol abuse, psychological breakdown, STD, AIDS, teenage pregnancy & other behavior maladjustment, How parents and teachers can help to overcome them.

### **REFERENCES**

- Berk L.E (1996) CHILD DEVELOPMENT , New Delhi, Pretice Hall.  
Craif G. (1999) Human development.  
Santrock J.W (1997) life span Development NY; Brown & Bench-mark.  
Cole M & cole S (1995) The development of children NY freeman and Co.

## **Practical**

M.M 25

Periods/wk.

Time 3 Hrs

- 1.Observing one child and an adolescent for different developments.
- 2.Construction and administration of interview schedule and questionnaire to study the problems of adolescents, peer interactions and parent child relationship.
- 3.Preparing play material and craft activities for middle and late childhood.

## **PSYCHOLOGY - I**

*Course No -303*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **Unit-I**

1. Psychology –Definition, scope & nature
2. Relationship of psychology with Home Science.

### **Unit -II**

1. Method of psychological studies with merits and demerits – observation, experimental methods, interviews technique, questionnaire & case study method.
2. Relation between mind and body.

### **Unit -III**

- 1.Sensation: Nature, attributes, special sensation, , functions
2. Perception—Meaning, functions, nature and fundamental characteristics

## Unit - IV

Attention : Nature and conditions of attention, Inattention.

Emotions : Definition, theories of emotion, influence of environment on emotions.

### *REFERENCES*

1. Hilgard E.R. Introduction to psychology.
2. Jalota S.S Introduction to psychology.
3. Morgan C.T. Introduction to psychology 1956 . Mc Graw Hill, New York.

## Introduction to Home Management - I

*Course No. 304*

M.M (Theory) .. 40  
Internal Asses ... 10  
Periods/wk.  
Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit - I

1. Introduction to Management - Definition & Concept of Management.
2. Management Process -
  - a) Planning - Importance , types of plan
  - b) Controlling - Energizing, checking, adjustment
  - c) Evaluation - Types, techniques of self-evaluation

### Unit -II

1. Decision Making –
  - a) Types of decisions
  - b) Steps is decision making
2.
  - a) Factors affecting decision
  - b) Inter-relatedness of decision
- 3 .Stages of family life cycle

### Unit-III

1. Factors Motivating Management.
  - a) Values - Introduction and classification
  - b) Goals - Definition, Classification
  - c) Standard- definition, classification
2. Resources in the family
  - a) Classification
  - b) Factors affecting use of resources
  - c) Similarities among resources.

### Unit - IV

#### **Management of specific resources**

1. Time-steps in time plan, tools in time plan
2. Energy-energy cost of various activities, fatigue, types, causes & effect, managing energy

#### *REFERENCES*

1. Chatterjee- S.S.1960 An introduction to management its principle & techniques world press private ltd.
  2. Deacon, Ruth E & Firebrough F.M.1975 – Home management- context and concept Boston Houghton Mifflin company.
  3. Gross I.H.& Crandall E.W 1963 Management for modern families, Appleton centurion crofts, New York.
  4. Nickell, I.P. Dorsey, J.M.1983, Management in the family living, Wiley eastern Ltd. New Delhi.
  5. Rustomji M.K.1983 Art of management, Delhi Mac Milan India Ltd.
  6. Swanson, B-1981 Introduction to home management Mac Milan, New York.
- Oberoi K & Sidhu, M- 2006 Resorce Management for better homes, Chetna Prakashan.

## Laundry Science and finishing fabrics

Course No -305

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit- I

1. Laundry equipments and their use.
2. Soaps and supplies – Soaps and detergents – Stiffening Agents – Blueing Agents, Bleaching and other Laundry reagents, grease absorbants and solvents,

### Unit -II

- 1.. Stains – Classification stains, methods of removing different types of stains;
2. Storage of clothes ,dry-cleaning of clothes(principle & use)
3. Laundering and care of following fabrics- cotton, silk, woolen& synthetics.

### Unit - III

1. Fabric finishes
  - a)Importance of finishing
  - b) Physical – Singing, napping, sizing ,tentering and calendring.
  - c) Chemical – Bleaching, Mercerizing.
  - d) Special purpose finishes – Wrinkle resistant, Water resistant & repellent, flame retardant.

### Unit-IV

1. Classification of dyes.
  - a) Natural dyes.
  - b) Direct, acid, basic, sulphur, vat mordant and disperse dyes.
2. Printing
  - i) Styles of printing –

Direct, Discharge, Resist, Dyed.

ii) Methods of printing – Block printing, Roller printing, Stencil and screen printing.

### *REFERENCES*

1. Deulkar Durga (1988) Household Textiles and Laundry work, AtmaRam and sons. Kashmiri Gate Delhi – 6.
2. Gupta Sushma (2005) Text Book of clothing Textiles and Laundry, Kalyani Publishers New Delhi.
3. Corbman Bp 1985 Textiles Fibre to fabric MC Graw Hill, New york.
4. Joseph M.L. (1976) Essentials of Textiles holt Reperiart of Winston, New York.
5. Joseph M.L/ (1972) Introductory Textile Science Holt Ripenhart of winsten, New York.
6. Hollen N & Saddler J Textiles (Latest edition) Mac Millan and Co. New York.

### **Practical**

M.M 25

Periods/wk.

Time 3 Hrs

1. Stain removal – Removal of any ten stains.
2. Washing & finishing of cotton (Blouse & sari, salwar kameez, Gathers frock, Gents Shirt, Silk blouse, Embroidered Table cloth, woolen cardigan, starching of fabrics.
3. Household dyeing, Tie & dye, Block printing, Stencil printing.

### **CONSUMER ECONOMICS**

*Course No. 306*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

## **UNIT -I**

Introduction to economics-

- Basic concepts of economics- goods and services, wants, utility, income-types of income ,consumer and consumption, standardization and grading

## **UNIT -II**

- Meaning and laws of consumption
- Demand and supply- laws and importance.
- Markets- types and functions of market.

## **UNIT- III**

- Consumer- definition, role of consumers in the economy, consumer buying motives- primary selective, rational, emotional and patronage.
- Malpractices prevailing in Indian markets- adulteration , faulty weight and measures, false advertisements, incomplete label , monopoly and other malpractices in market.
- Buying aids – labels , packaging and advertising ,buying guides ,role of educational institutions.

## **UNIT- IV**

.Rights and responsibilities of consumer.

- Consumer education- meaning needs, objectives,media and the consumer.
- Laws for consumer protection ,consumer organizations.

### *REFERENCES-*

Leland J.Gordes,Sterward M.Lee-Economics& consumer, D'van Nestrand Co. New York.

Sarkar A-Problems of Consumer's in Modern india,Discovery Publishing house.

Cochrane W.W and Bell C.S the economics of consumption Mc Grew Hill.

Singh Gubax- Law of consumers protection Jaipur Bharat Law Publishers.

Aggarwal Anju D(1989)-Practical handbook for consumer Bombay India book house.

Seetharam P&Seth M 2001 consumerism: strategies and tactics CBS.

## **Food Science -1**

Course No-307

M.M (Theory) .. 40



Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **UNIT- I**

1. Food science and its application.
2. Food technology and future foods. Biofortification ,Nutraceuticals, Organic foods, Space foods, Packaging of foods, Biotechnology.

### **UNIT- II**

3.Cereals and cereal products – composition and nutritive value of wheat , rice, their milling and processing ,storage, use in various preparations, millets like corn, jowar, ragi, bajra

Cereal cookery

Breakfast cereal

### **UNIT -III**

4. Pulses and legumes- nutritive value , processing , storage, toxic constituents, pulse cookery, variety.

5)Fats and Oils- Nutritional importance, types, composition, processing, rancidity, smoking point ,storage, use in different preparations, specific nuts and oilseeds- their nutritive value (in brief).

### **UNIT -IV**

6 Milk and milk products- composition , nutritive value, effect of heat ,acid and enzymes. ,processing, storage, use in different preparations., milk products.

7.. Sugar and related products- nutritive value, properties, sugar related products , stages in sugar cookery, sugar cookery, artificial sweeteners.

## REFERENCES-

- Food science, B. Srilakshmi, New age International publishers.
- Introductory Foods- Hughes, O. and Bunion, M , Mc Millan and co ,Newyork.

## Practical

M.M 25

Periods/wk.

Time 3 Hrs

Preparation , serving and evaluation of recipes.

1. Any five beverages.
2. Any two breakfast cereal preparations.
3. Any two pulao's , two stuffed paranthas,twofermented cereal preparations ,pasta preparations,curd rice, tamarind rice, lemon rice, poha, upma plus two morecereal preparations of choice.
4. Pulse – any five recipes.
5. Milk and milk products- Any five preparations.
6. Any five snacks and desserts.
7. Any two ice-creams.
8. Any two types of cakes and biscuits.
9. Any two types of sandwiches.
10. Any two types of chikkis.

## SEMESTER -IV

### COMMUNITY DEVELOPMENT AND COMMUNICATION

Course No. 401

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **UNIT- I**

Communication-

1. Meaning, scope and importance of communication.
2. Elements of communication.
3. Problems of communication with special reference to India.
4. Models of communication and various types of communication

### **UNIT -II**

1. Classification of teaching methods according to form and use
2. . The scope , advantage and limitations of different extension methods.

### **UNIT- III**

- 1.Panchayati raj system- meaning, functions, organizational set up, problems
- 2.Principles of democratic decentralization

### **UNIT -IV**

1. Classification of audio- visual aids- different aids, their scope, advantage and limitations, factors limiting the selection and use of audio-visual aids.
2. Use of radio talks, television, personal talk, conferences, tours, campaigns, village fair

### ***REFERENCES***

- Roy, G. L. (1991):Extension Communication Management, Calcutta, Naya Prakash.
- Jain,R. (1993): Mass Media and Rural Development. Vol II, New Delhi, Manak Publications Pvt. Ltd.
- Thakur, B. S. and Agarwala , C. (1989): Media utilization for the Development of Women and Children, New Delhi, Concept Publishing Co.
- Mody Bella. (1991): Designing messages for Development Communication, New Delhi, Sage Publications.

### ***PRACTICALS***

M.M 25  
Periods/wk. 2  
Time 3 Hrs

1. Use of any five non- projected aids to educate rural women on different aspects
2. Preparation of projected aids- Transparency and power point presentation
3. Use of puppet as a media of communication
4. Preparing a radio talk on any topic .

### **Human Development - III**

Course No. 402

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

#### **Unit – I**

Young Adulthood (19-40years)

1. Definition, Development tasks, significance of the period, responsibilities and adjustment, new family, workplace, parenthood, independence, financial matters.
2. Sex role issues & implication for young adults.

#### **Unit – II**

Middle adulthood (41-60years)

3. Definition, physical changes (senses & diseases) Menopause, health issues, stresses in middle age, coping with stress at family & work place.  
Occupation and job satisfaction, preparation for retirement.

#### **Unit –III**

Late adulthood & Ageing(beyond 60 years)

5. Definition ,developmental tasks of old age, common interests in old age.,adjustment to family life in old age.
6. Psychological changes, health problems, cognitive & memory change.

#### **Unit - IV**

7. Retirement – Effect on self, family, society, identity and friendship.  
Problems of old age and coping strategies.

*Reference:*

Berk L.E (1996) CHILD DEVELOPMENT , New Delhi, Pretice Hall.

Craif G. (1999) Human development.

Santrock J.W (1997) life span Development NY; Brown & Bench-mark.  
Cole M & cole S (1995) The development of children NY freeman and Co.

## **PSYCHOLOGY - II**

*COURSE NO 403*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **UNIT- I**

- 1) Motivation – definition, types of motives.
- 2) Learning- meaning ,nature and theories of learning, principles of learning , factors affecting learning, effect of motivation on learning.

### **UNIT- II**

- 1) Intelligence- definition , theories of intelligence, development and measurement.
- 2) Thinking & Imagination-
  - a) Concepts and other tools of thinking.
  - b) Reasoning as related to imagination and thinking.
  - c) Imagination- nature and development.

### **UNIT- III**

PERSONALITY-

- a) Concept and definition
- b) Personality types
- c) Assessment of personality.
- d) Factors influencing personality (biological and social).
- e) Freud' s theory of personality.

### **UNIT- IV**

MEMORY-

- a) Definition and analysis

- b) Types of memory
- c) Remembering and memory.
- d)Improvement of memory

#### FORGETTING

- a)Definition
- b)Types
- c)Theories

#### *REFERENCES-*

- Morgan C.T. Introduction to psychology.1956.McGraw Hill, NewYork.  
Hillgard E.R. Introduction to psychology. 1958. NewYork.  
Murphy G. An Intrduction to psychology. Harper and Row , New York.

### **Institutional Food Management**

*Course No. 404*

M.M (Theory) .. 40  
Internal Asses ... 10  
Periods/wk.  
Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

#### **Unit - I**

Catering Management – Definition & scope

Hygiene and sanitation -Environmental hygiene and sanitation, hygiene in food handling, personal hygiene.

#### **Unit -II**

Organization of spaces---

- a. Kitchen spaces – Work space, work surfaces, lighting, and ventilation.
- b. Storage spaces – Location; types; sanitation, safety and security of stores.
- c. Service areas – Location & planning.

#### **Unit – III**

Menu Planning – Planning and writing menus, types of menus, use of menu.  
Food service – Various styles of service.

#### **Unit – IV**

Food Cost Control--

Why control food costs, costing of dishes, meals and events.

Pricing---

Methods of pricing, factors affecting pricing.

*Reference:*

1. Catering Management – An integrated approach – Mohin Sethi & Surjeet Malhan wiley eastern limited, New Delhi
2. Our Food – Planning, Preparation & preservation, Dr.(Mrs.) Usha Singhal, Kem publishers.

### **Garment Construction & Apparel Science**

*Course No. 405*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

#### **Unit - I**

1. Selection of garments for Infants, Toddlers, preschool, school going children.
2. Selection of garments for teenagers, adults and people of old age.

#### **Unit -II**

- 1.. Selection of household linen, curtains, draperies and towels.
2. Selection of readymade garments.
3. Renovation and mending of clothes.

#### **Unit –III**

1. Construction Techniques –

- a). Drafting
  - b) Paper patterns
  - c). Draping
- 2.. Fit – Definition, Recognizing correct fit using structural lines, balance and ease to evaluate fit. Common problems encountered and remedies for fitting defects.

#### **Unit –IV**

- 1. Fashion in Dress-
  - a) Sources of fashion
  - b) Factors favoring and retarding fashion
  - c). Buying criteria for readymade garments.
- 2. Fashion cycle

#### *Reference:*

- 1. Baines, S. and Hutton, J.Singer Sewing Book.
- 2. Doongaji, Basic processes and clothing construction, 6ed., New Delhi, Raaj prakashan.
- 3. Dhantiyagi, S. Fundamentals of textiles and their care 4<sup>th</sup> ed., New Delhi, Orient Longmans 1983.
- 4. Wingate, B. Isable, Textile fabrics and their selection. 7<sup>th</sup> ed., Eaglewood chilft, prentice Hall,1976.
- 5. Carson, Bejrta, 1949, How you look and dress, Mc Graw Hill Co. Inc, New York.

#### **Practical**

M.M 25

Periods/wk. 3

Time 3 Hrs

- 1. Drafting of child’s bodice block with and collars. Construction of ‘A’ Line or a frock with gathers.
- 2. Drafting and stitching of salwaar and kameej.
- 3. Drafting and stitching of petticoat

#### **Introduction to Home Management-II**

*Course No. 406*

M.M (Theory) .. 40



Internal Asses ... 10  
Periods/wk.  
Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.  
Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **Unit-I**

- 1.Ergonomics in home— An introduction
- 2.Work simplification – Body mechanics, Mundel’s classes of change in work simplification, work study techniques---pathway chart ,operation chart

### **Unit-II**

Financial Management

3. Income- types of income, budget, definitions ,types  
Steps in making budget, factors affecting budget
4. Saving- Objective, types of Saving-Bank, insurance, provident fund,

### **Unit -III**

5. Credit- its use, types of credit, problems in credit
- 6.Taxation- Types- direct & indirect. Basic calculation of income tax

### **Unit-IV**

Introduction to art

- 7.Definition of art, elements of art- line, form texture, color, pattern, shape, light, space,

Color – classification, dimension, color scheme

1. Factors influencing choice of colours in decoration

### *References*

1. Gross I.H.& Crandell E.W 1963 Management for modern familiar Appleton centurion crofte, New York.
2. Nickell, I.P. Dorsary, J.M.1983, Management in the family living, Wiley eastern Ltd. New Delhi.

3. Steidle and Bratton 1967 work in the Home John wiley and sons, New York.
4. Seetharaman P, Batra S.& Mehran P 2005. An introduction to family resource management, CBS
5. Bridger R.S. 1994, Introduction to Ergonomics, Mc Graw, Hill.
6. Dalela S. & Saurabh 1999, textbook of work study and ergonomics. Standard publishers.
7. Mundel M 1978 Motion and time study, prentice hall .
8. Sharon V 2005 Modern Home management, Sreenivas Publishers

### **PRACTICALS**

M.M. 25

Period\week 3

Time 3 hrs

1. Making budget for LIG, MIG, HIG.
2. Pathway chart for time and energy management.
3. Calculating income tax.
4. Making color wheel and color schemes-complementary, monochromatic, triad, analogous.
5. Floor decoration-Alpana and Rangoli.

### **FOOD SCIENCE - II**

*COURSE NO –407*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **UNIT- I**

1. Vegetables and Fruits- classification, composition ,nutritive value,selection, vegetable cookery, storage,

2. Post-harvest changes in fruits, enzymatic browning, use in different preparations.

### **UNIT- II**

- 1) Raising and leavening agents-types, uses in cookery and bakery,
- 2) Eggs- composition, quality of eggs, egg cookery, use of egg in different preparations.

### **UNIT -III**

- 1) Meat ,fish and poultry- Meat- composition , and nutritive value, postmortem changes,ageing of meat, tenderizing of meat ,curing of meat , cuts and grades of meat , meat cookery, storage.
- 2) Fish- types, composition, fish cookery, spoilage, storage.  
Poultry – types, composition, and nutritive value, cooking of poultry, storage.

### **Unit – IV**

- 1) Spices and condiments – classification description, uses, procurement and storage. A note on herbs.
- 2) Evaluation of food quality – Sensory evaluation, types of tests, objective evaluation, instruments used for texture evaluation.

#### *Reference:*

Food science, B. Srilakshmi, New age International publishers.

Introductory Foods- Hughes, O. and Bunion, M , Mc Millan and co ,Newyork.

#### Practical

M.M 25

Periods/wk. 3

Time 3 Hrs

Preparation of jams, jellys , chutneys, pickles, marmalades, murabbas.

Visit to a food industry and writing a report.

**B.Sc- HOME SCIENCE -- (w.e.f. session 2012-2013)**

***SEMESTER V***

**FAMILY DYNAMICS**

*Course No. 501*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

**UNIT-I**

1. Marriage

- As an institution, needs and goals
- Criteria for successful marriage.
- Adjustments in marriage.
- Inter-caste and inter-religious marriage.

**UNIT-II**

2. Family

- Definition, functions of family.
- Family life cycle stages.
- Changing trends in India due to westernization and modernization (family values, ideologies, family structure, social change).

3. Factors influencing planned parenthood.

**UNIT III**

1. Alternate family styles –

- a. single parent family,
- b. DINK families (Double income no kid)
- c. , latch key children
- d. families with adopted children.

## UNIT - IV

4. Internal relations within the family-
- a. Individual roles, rights and responsibilities within the family.
  - b. Areas of adjustments within the family at different stages of family life cycle – parents, siblings, children and others.
  - c. Crisis in a family – bereavement, divorce, long illness, birth of a handicapped child.

### ***REFERENCES***

1. Augustine, J.N (Ed) (1992); The family in Transition, New Delhi, Vikas Publishing House.
2. Coleman, JC (1986); Intimate relationships, marriage and the family, Chicago, Macmillan Publishing Co.
3. Corser, Rose (1975); The family; its structure and function, New York, Mac Publishing Co.
4. Guppy, G R (1976); Family and Social Change in modern India, New Delhi, Vikas Publishing Co.
5. Gore, MS (1978); Urbanization and family change in India, Bombay, Popular Prakashan.
6. Hunter, Mark (1981); The changing family; comparative perspectives, New York; Vikas Publications.
7. Rao P. and Rao V N (1982); Marriage – The family and women in India, New Delhi, Vikas Publications.
8. Ross, a (1973); Hindu family in urban setting, Delhi UAP.
9. Srivastava, AK (1986); Social class and family life in India.

### **CHILDCARE & REARING PRACTICES**

*Course No. 502*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

## **UNIT- I**

1. Pregnancy – Signs, discomforts, care of expectant mother.
2. Confinement, types and stages of delivery and care of the new born.
3. Feeding-Breastfeeding and artificial feeding

### **UNIT- II**

4. Weaning
5. Supplementary food.

### **UNIT-- III**

6. Sleep routine
7. Toilet training and hygienic practices
8. Role of mother in training of the infant.

### **UNIT - IV**

9. Problems and remedies-----
  - Regarding feeding
  - Sleep disorders
  - Excessive fear - Bed wetting ,nail biting, thumb sucking
  - Sibling rivalry
  - Separation anxiety
  - Speech disorders

### ***REFERENCES***

1. Arya and Subhash C.; Infant Child Care for the mother, Vikas, New Delhi 1972.
2. Bernard, H W and Fullner D.W; Principles of Guidance, Allied Publishers 1972.
3. Ambron S R; The developing Child, Chase Busellg Illinoise 1975.

### **PRACTICALS**

M.M 25

Periods/wk. 2

Time 3 Hrs

1. Interesting activity for children below 5 years of age
- 2 .Visit to a childcare centre in a hospital.
- 3 Making immunization chart.
4. Study of feeding patterns of different income group children using observation method.
5. To know the awareness level of pregnant women (educated and illiterate) using interview method.
- 6 .Making soft toys-2

## **NUTRITIONAL BIOCHEMISTRY- I**

Course No. 503

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **UNIT- I**

1. Introduction to Biochemistry – Definition, objectives, inter-relationship between biochemistry and other biological sciences.
2. Enzymes – Definition, classification, different types of coenzymes, specificity of enzymes, factors affecting enzyme activity, enzyme kinetics, cofactors, enzyme inhibition (competitive and non-competitive).

### **UNIT- II**

3. Vitamins – Biochemical role of vitamins A, D, E and K, B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, B<sub>6</sub> and Vitamin C.

### **UNIT- III**

4. Carbohydrates – Definition, classification, structure and properties of:-  
Monosaccharide – glucose, fructose, galactose.  
Disaccharides – Maltose, lactose, sucrose  
Polysaccharides – Starch, glycogen ; Complete cycle and structures of glycolysis and gluconeogenesis, glycogenesis, glycogenolysis.

### **UNIT- IV**

5. Proteins – Definition, classification, structure and properties. Amino acids and their types, structure. General reactions of amino acids metabolism (transamino oxidative deamination, decarboxylation) Urea cycle (Complete cycles with structures)

## REFERENCES

1. West E. S. Todd; Textbook of biochemistry – Amerind Publishing Co. Pvt. Ltd.

2. Murry, R K Granner, D K Mayes, PA and Rodwell, V.W (1993); 23<sup>rd</sup> Ed Harpens Biochemistry.
3. Lehninger, A L Nelson, D L and Cox, M M (1993); 2<sup>nd</sup> Ed Principles of Biochemistry, CBS Publishers and distributors.

### **PRACTICAL**

M.M 25

Periods/wk. 3

Time 3 Hrs

1. Reactions of Monosaccharide disaccharides and polysaccharides.
2. Estimation of amount of glucose in the given solution by Fehling's soxhlet increment method.
3. Identification of amino acids in amino acids mixture by circular chromatography technique.

### **COMMUNITY NUTRITION**

*Course No. 504*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **UNIT - I**

Nutritional problems of the community and implications for public health.

- Common problems in India
- Causes – nutritional and non-nutritional.

### **UNIT-- II**



- Prevalence, causes, signs and symptoms, prevention and treatment of PEM, Vitamin A deficiency, iron deficiency anaemia, iodine deficiency and fluorosis.

### **UNIT-- III**

Schemes and programs to combat nutritional problems in India.

- Prophylactic Programmes
- Midday meal programme.
- ICDS

### **UNIT-- IV**

Assessment of nutritional status – dietary survey, anthropometric measurements, clinical survey, bio-physical and biochemical tests, vital statistics.

### *REFERENCES*

1. Bamji, M.S; Rao N. P. and Reddy V. 1996; Textbook of Human Nutrition. Oxford and IBH publishing Co. Pvt. Ltd., New Delhi.
2. Shukla, P K ( ) Nutritional problems of India,

### **PRACTICALS**

M.M 25  
Periods/wk. 2  
Time 3 Hrs

- Visit to an institution (anganwadi, Govt. school or any other) having mid day meal scheme and writing a report.
- Dietary survey of atleast 5 subjects using questionnaire and 24-hour recall method.
- Taking anthropometric measurements of atleast two subjects (height and weight only) and calculation of BMI.
- Clinical examination of two malnourished pre-school children
- Visit to a community kitchen and writing a report..

### **Indian Textiles**

*Course No. 505*

M.M (Theory) .. 40  
Internal Asses ... 10  
Periods/wk.  
Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **UNIT-- I**

Importance of Indian Textiles in historical perspective.

- Cotton – Muslins and Jamdanis of Bengal and UP Dhotis and saris of Andhra Pradesh, Madhya Pradesh Maharashtra, Karnataka and Tamil Nadu.
- Silks and brocades of Varanasi (Kunkhabs), Bengal (Baluchari) Maharashtra (Paithani), Gujrat (Tancois), Andhra Pradesh, Tamil Nadu and Karnataka.
- Woollen – Shawls of Kashmir, Punjab, Himachal Pradesh
- Carpet weaving centers of India.

### **UNIT-- II**

Indian Hand Embroidery

- Origin of embroidery in India, its place in everyday life.
- Embroideries of different regions – Kashmir, Punjab and Haryana, Himachal Pradesh, Uttar Pradesh, Bihar, Bengal, Gujrat and Banjara tribal embroideries,

### **UNIT --III**

- Dyeing and Printing – Study with reference to the antiquity of the art of dyeing and printing.
- Methods of printing techniques-block, screen, roller, resist dyeing and printing techniques.

### **UNIT-- IV**

Bandhanis of Rajasthan and Gujrat.

- Batik of Coromandal
- Patola of Gujarat, Ikkats of Orissa.
- Printing and painting – Styles and methods of printing (Hand block printing, Kalamkari)

### ***REFERENCES***

- Chattopadhaya K. D. 1975, handicrafts of India, All India Handicrafts Board, New Delhi.

- Chattopadhyaya K. D 1977; Indian Embroidery, Wiley Eastern Limited, New Delhi.
- Chattopadhyaya K. D. 1975, Indian Carpets and Floor Coverings, All India Handicrafts Board, New Delhi.
- Das, Sukla, 1992 Fabric Arts heritage of India, Abhinav Publications, New Delhi
- Donerkery, Kamala 1951, The Romance of Indian Embroidery, Thacker and Co. Ltd., Fort Bombay.
- Irwin John and Hall, Margaret, 1971, Indian Painted and Printed Fabrics, Vol I, Historic – Textiles of India at the Calico Museum, Calico Museum of Textiles, Ahmedabad.
- Jaitly, Jaya, 1990, Crafts of Jammu, Kashmir and Ladakh, Mapin Publishing Ltd., Chidambram, Ahmedabad.
- Mookerjee, A, 1958, 5000 Indian Design and Motifs, The Indian Institute of Art in Industry, Artistry House, Calcutta.

### PRACTICALS

M.M 25

Periods/wk. 3

Time 3 Hrs

1. A visit to museum, crafts centres, exhibitions and craft melas
2. Portfolio development of designs in Traditional Textiles as specified in theory.
3. Preparation of at least five samples of traditional embroideries (specific designs and stitches)

### Interior space designing

*Course No. 506*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit-- I

1. Housing & space management, Selection of site, orientation, soil, locality, sanitation facilities etc.
2. principle of planning of room-grouping of rooms, circulation, flexibility, privacy, spaciousness, ventilation

### Unit --II

3. Building material for construction stone, brick, cement-concrete ,plastic, wood, glass, iron.
4. Principle of economic design-  
Economy in plot, economy in planning ,economy in construction. Calculating cost of construction.

### Unit-- III

5. Principle of Kitchen planning-orientation & location, size & shape, ventilation & light, socio economic status of family, cost & aesthetics, storage needs, work centre & work triangle, color & safety.
6. Types of kitchen.

### Unit --IV

7. Selection of equipment and factors affecting it.
8. Care & maintenance of household equipment -refrigerator, washing machine, microwave oven, vacuum cleaner, iron, toaster ,cooking range.

### *References*

1. Deshpande R.S(1980)Modern ideal homes for India-Deshpande Publication Trust.
2. Deshpande R.S(1980)-Building your own house united book corporation.
3. Tessie Agan(1980)-The House-its plan & use, New York,J.B lippincott co.
4. Faulkher s.(1977)-Planning a House, Rivehart and winson.
5. Peet, Picket and Arnold-Household equipment 1985 John Wileyand Sons.
6. Singh surendra: Engineering materials- Vikas publishing house ltd.

### Practical

M.M 25

Periods/wk. 3

Time 3 Hrs

1. Drawing house plan for LIG, MIG, HIG.
2. Planning furniture arrangement and color schemes for different rooms.
3. Cleaning and care of metals , glass & upholstery.
4. Care & Maintenance of equipments- washing machine, vacuum cleaner, refrigerator, microwave oven, iron, toaster, cooking range.

### **Normal Nutrition**

*Course No. 507*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **Unit – I**

1. Definition of health and Nutrition. Effect of nutrition on health. Energy requirements, Factors affecting energy requirements – BMR, Activity, age, climate, SDA, physiological conditions.

### **Unit – II**

2. Concept of nutritionally adequate diet and meal planning.

a) Importance of meal planning.

b) Factors affecting meal planning.

Nutritional, Sociocultural, religious, geographic, economic, availability of time and material resources.

### **Unit – III**

3. Nutritional requirements, nutritional problems and food selection during---

i) Adulthood

ii) pregnancy

iii) lactation

iv) old age

### **Unit --IV**

4. Nutritional requirements, problems and food selection during infancy, preschool, school going and adolescence.

#### *Reference:*

1. Krause M.V & Mahan L.K (1986) ; food, Nutrition and diet therapy , Alan R. Liss, Saunders Co. London.

2. Passmore R. & Davidson S. (1986) Human Nutrition and dietetics. Living stone publishers.

3. Robinson C.H Laer M.R Chenoweth W.L Garwick, A.E (1986) Normal and

therapeutic Nutrition Mc Millan Publishing Co. New york.

4. Williams S.R (1989) Nutrition and Diet therapy 4<sup>th</sup> edition C.V. Mosby Co.

### **Practical**

M.M 25

Periods/wk. 3

Time 3 Hrs

1.Planning, preparation and evaluation of diets for an adult man and women at different activity and socioeconomic levels.

2. Planning, preparation of diets for a/an.

a) Pregnant mother.

b) Lactating mother

c) Elderly person

d) Infancy

e) Preschool Child

f) School going child

g) Adolscence

h) Old Age

### ***SEMESTER VI***

#### **Women Empowerment**

*Course No. 601*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **Unit – I**

1. Status of Indian women – pre and, post independence,

a) legal,

b) social,

- c) economical,
- d) political
- e) educational status.

### **Unit – II**

Contemporary problems and issues related to women –

- a) Families with marital disharmony.
- b) Violence, abuse and dowry victimization of women.
- c) Sexual discrimination and exploitation of Indian women.

### **Unit – III**

#### 1. Empowerment of women

- a) Mass media and women empowerment.
- b) Education, employment and empowerment.
- c) Home Science education as empowerment-Role of home science for personal growth and professional development.

### **Unit --IV**

- 1. Trends in women's movements in reference to India
- 2. Social welfare programme and their impact.

#### *Reference:*

- 1. Augustine, J.N (Ed) (1992); The family in Transition, New Delhi, Vikas Publishing House.
- 2. Coleman, JC (1986); Intimate relationships, marriage and the family, Chicago, Macmillan Publishing Co.
- 3. Corser, Rose (1975); The family; its structure and function, New York, Mac Publishing Co.
- 4. Guppy, G R (1976); Family and Social Change in modern India, New Delhi, Vikas Publishing Co.
- 5. Gore, MS (1978); Urbanization and family change in India, Bombay, Popular Prakashan.
- 6. Hunter, Mark (1981); The changing family; comparative perspectives, New York; Vikas Publications.
- 7. Rao P. and Rao V N (1982); Marriage – The family and women in India, New Delhi, Vikas Publications.

8. Ross, a (1973); Hindu family in urban setting, Delhi UAP.
9. Srivastava, AK (1986); Social class and family life in India.

### **CHILD WELFARE**

Course No. 602

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

#### **Unit - I**

1. Definition and, objectives of child welfare.
2. Philosophy of child welfare
3. National Policy of child welfare-
  - .---needs
  - organisation
  - goals

#### **Unit --II**

- 1.. Problem of school dropouts.
2. Problem of child labour.
3. Effect of mass media on children.
4. Deprivation among children---
  - nutritional
  - educational
  - emotional

#### **Unit – III**

1. Children with special needs, their rehabilitation and care
  - Blind children
  - Deaf & Dumb
  - Mentally retarded children.
  - juvenile delinquency-causes & ways to tackle the menace.



### **Unit --IV**

4. Voluntary Agencies working for child welfare.
5. International agencies working for child welfare
7. Family planning programme in India

#### *Reference:*

1. Arya and Subhash C., infant child care for the mother, vikas New Delhi, 1972.
2. Bernard H.W and Fullness D.W. , Principles of guidance, Allied Publishers 1972.
3. Ambron, S.R., The developing child exhase Burella, Illinoise 1975.

### **Practical**

M.M. 25

1. Visit to nursery schools, Crèches and bal bhawan.
2. Visit to the institutes for children with special needs.
3. Preparing play material and toys for children from 4-6 years old.
4. Survey to know deprivation of girls in different income groups.
5. Involvement in child welfare activities & write a report on it.
6. To make a resource file regarding child welfare happenings.

### **Nutritional Biochemistry II**

*Course No. 603*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **Unit - I**

1. Lipids – Definition, classification of lipids, properties of fatty acids,(Acid value, Iodine value and saponification value) (in brief)
2. Lipids – Beta oxidation and biosynthesis of fatty acids (To be done with structures and

reactions) (ketone body formation, ketosis, fatty livers ) (Just notes)

### **Unit - II**

3. Biological oxidation – TCA cycle, E.T.C. Oxidative phosphorylation theories.

### **Unit --III**

4. Elementary knowledge of biosynthesis of proteins.

### **Unit -- IV**

5. Nucleic acids, types , composition, replication, transcription, genetic – code. Structure of DNA & RNA.

#### *Reference:*

1. West E. S. Todd; Textbook of biochemistry – Amerind Publishing Co. Pvt. Ltd.
2. Murry, R K Granner, D K Mayes, PA and Rodwell, V.W (1993); 23<sup>rd</sup> Ed Harpens Biochemistry.
3. Lehninger, A L Nelson, D L and Cox, M M (1993); 2<sup>nd</sup> Ed Principles of Biochemistry, CBS Publishers and distributors.

### **Practical**

M.M. 25

1. Reactions of fats & oils.
2. Determination of acid value of fats and oil.
3. Determination of saponification value of fats & oil.
4. To study properties of amino acids phenylalanine, tyrosine, arginine, cysteine, tryptophan( ninhydrin test, million's test, Sakaguchi test, Hopkins'cole test, lead acetate test, xanthoproteic test)

## **FOOD MICROBIOLOGY**

*Course No. 604*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **Unit – I**

- a) Characteristics of moulds ,yeasts and bacteria, useful and pathogenic organisms.
- b) Brief history of food microbiology and important micro – organisms in food.

### **Unit - II**

- a) Primary sources of micro – organisms in foods.
- b) Extrinsic and intrinsic parameters affecting growth and survival of microbes.
- c) Contamination and micro – organisms in the spoilage of different kinds of foods and their preservation. – Cereal and cereal products egg and poultry, milk and milk products, canned foods.

### **Unit -- III**

- a) Food Preservation : Use of high and low temperature, dehydration, freezing, freeze drying, irradiation in food preservation.
- b) Microbes used in food biotechnology, fermented foods and their benefits.

### **Unit - IV**

- a) Public health hazards due to contaminated foods – food borne infections and intoxication, symptoms, mode and sources of transmission and methods of production.
- b) Indices of food, milk, water sanitary qualities, microbiological criteria of food, water and milk testing (Bacteriological analysis)

#### *Reference:*

Frazier, W.C. and Westhoff, D.C. (1988) : Food microbiology. Fourth edition. Mc Graw Hill Inc.

Jay James, M.(1986) . Modern food Microbiology. Third edition. Van Nostrand Reinhold Company Inc.

Pelezar, M.I and Reid, R.D (1978). Microbiology. Mc Graw Hill Book Co.

Sharma P.D. (1996) Microbiology second edition Rastogi Publications Meerut.

### **APPAREL DESIGNING**

*Course No. 605*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### **Unit – I**

Design –

1. Definition – Components of design.

a) Structural designs in fabrics –i) Through variation in yarn,

ii) Variation in weaves

iii) By giving decorative finishes

2) Applied designs in fabrics –i) Through dyeing,

ii) Through printing

iii) Through embroidery.

### **Unit -II**

1. Elements of design –

i) Line, form and shape analysis and its appropriate use.

ii) Texture analysis and its use in relation to size, figure occasion and season.

iii) Colour – Its dimensions, its use and relation to season, occasion, size, figure and occasion.

3. Principles of Design -

Principles of design as applied to apparel design such as balance, harmony, rhythm, proportion and emphasis.

### **Unit - III**

1. Figure types -----

a) Average types of figures for which ready to wear garments are made

b) Designing clothes for following figures-----i) tall and stout .ii) short and stout iii)tall and thin iv)short and thin ,

c) Designing clothes for figures with variations like---large hips, large bust, large upper arm, prominent abdomen etc.

### **Unit - IV**

1. Elementary Computer aided Designing.
2. Computers in apparel construction.

#### *Reference:*

1. Gioello and Berke, 1979 Figure types and size Fairchild publications, New york.
2. Liechty, Pottersberg and Rasband 1986, Fitting and pattern Alration : A multi method approach, Fairchild publicating New york.
3. Margolis, Adole P. 1971 Design your own Dress patterns, Doubleday and Co. Inc. New york.
4. Armstrong, H.J. 1987 , Pattern making for fashion Designs.

### **Practical**

M.M. 25

1. Introduction to elements of design.
  - a) Line and form – Geometric, simplified, naturalized and abstract.
  - b) Colour – Colour wheel, grey scale and value scale, colour harmonies and colour ways.
  - c) Creating design – Development of motif, placement for all over patterns.
  - d) Motif enlarging and reducing
2. Batik on cotton fabric.
3. Preparation of articles using various using various techniques of applied design –
  - a) One Household article.
  - b) One Apparel.

### **Interior Designing**

*Course No. 606*

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.  
Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

### Unit –I

1. Furniture – selection & type

Furniture arrangement

2. Type of lighting suitable for different areas of the house.

### Unit –II

3. Various types of accessories & their place in interior decoration.

4.. Window treatment - Basic window treatment, types of curtains.

5. Draping fabric – selection & care

Hanging of curtain – pelmet, swags, valances.

### Unit -- III

6.Wall finishes—paints, wood paneling, wall paper

7. Floor treatment types-brick, stone, tiles, soft floor covering –carpet and rugs (types and care)

### Unit – IV

8. Design – definition & types.

Principles of design – harmony, balance rhythm, proportion & emphasis.

9 Flower arrangement –

Types of flower arrangement & basic shapes .Use of principle of design in flower arrangement.

#### *Reference:*

1. Rutt Anna Hng(1961)- Home Furnishing – wiley eastern Pvt. Ltd.

2. Bhat Pranav and Geonka Shanita (1990). The foundation of art and design Bombay Lakhani book depot.

3. Goldstein H and Goldsteen V (1967) art in Everyday life. New Delhi Oxford & IBH Publishing company.

4. Seetharaman P & Pannu P.2005 Interior design and decoration C.B.S.

### Practical

M.M 25

Periods/wk. 3

Time 3 Hrs

- 1) Flower arrangement for different areas in house.
- 2) Pottery painting & decoration.
- 3) Making samples of different types of curtains.
- 4) Creating art pieces using various types of material & techniques like candle decoration, utility article, gift wrapping, greeting card, decorative envelopes(any two)

### **THERAPEUTIC NUTRITION**

Course No. 607

M.M (Theory) .. 40

Internal Asses ... 10

Periods/wk.

Time 3 Hrs

Note 1 – The examiner will set nine questions in all, selecting two questions from each unit and one question (Q.No.1) of objective type having 8 sub-parts covering all units.

Note 2 -- The Candidates will attempt five questions in all, selecting one question from each unit and the compulsory Q. No.1. All questions carry equal marks.

#### **Unit - I**

1. Principles of Diet Therapy -  
Modification of normal diet for therapeutic purposes, full diet soft diet, fluid diet, Bland diet.
  
2. Dietician and the role of a dietician.

#### **Unit – II**

3. Causes, types, Nutritional management in following diseases –
  - a) GI tract disorders - Diarrhoea & constipation.
  - b) Fevers – Typhoid and T.B.

#### **Unit – III**

1. Causes, types and Nutritional management in
  - a) Weight management – Obesity and under nutrition
  - b) Diabetes Mellitus

#### **Unit --IV**

4. Causes and nutritional management in-

- a) Hypertension
- b) Kidney disorders.

*Reference:*

1. Krause M.V & Mahan L.K (1986) ; food, Nutrition and diet therapy , Alan R. Liss, Saunders Co. London.
2. Passmore R. & Davidson S. (1986) Human Nutrition and dietetics. Living stone publishers.
3. Robinson C.H Laer M.R Chenoweth W.L Garwick, A.E (1986) Normal and therapeutic Nutrition Mc Millan Publishing Co. New york.
4. Williams S.R (1989) Nutrition and Diet therapy 4<sup>th</sup> edition C.V. Mosby Co.

**Practical**

M.M. 25

Planning and preparation of diets in the following disease conditions and prescribing modifications –

- a) Constipation
- b) Diarrhoea
- c) Fever – Typhoid
- d) Hypertension
- e) Diabetes Mellitus
- f) Obesity