

KURUKSHETRA UNIVERSITY, KURUKSHETRA
SYLLABUS FOR THE B.SC. HOME SCIENCE (FIRST YEAR)
SEMESTER – I w.e.f. 2011-12

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Int. Ass	
1.	101	General English – I*	3 hrs.	40	10	50
2.	102	Hygiene and Promotive Health	3 Hrs.	40	10	50
3.	103	Introduction to Textiles Practical**	3 Hrs.	40	10	50
4.	104	Food Science Practical**	3 Hrs.	40	10	50
5.	105	Introductory Chemistry Practical**	3 Hrs.	40	10	50
6.	106	Introduction to Human Development	3 Hrs	40	10	50
		G. Total				300
		Environment Science*				
		Computer Applications*				

Note: * The student will study this course along with BSc students of Medical and Non Medical students as per university rules.

** The Practical examination of Ist Semester will be held at the end of IInd Semester.

B.SC. I (HOME SCIENCE)

SEMESTER - I General English -I

Course No. : 101

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

Scheme of the Question Paper

The paper will have seven questions as per details given below

- Q.1. The Candidate will be asked to answer comprehension questions based on an extract from the text book. There will be internal choice.
- Q.2. The candidate will be asked to explain with reference to the context an extract from the text book. There will be internal choice.
- Q.3. There will be five short answer type questions based on the text book. The candidate will be asked to give answers in about 30 words each. There will be internal choice
- Q.4. There will be one essay type question based on the text book with internal choice.
- Q. 5. Translation of a passage of about 10 sentences from Hindi to English
- Q.6. Paragraph (The candidate will be required to write about 2100 words on any one of the five given topics).
- Q.7. There will be question with parts on the following items: common phrasal verbs, prepositions, common errors in English

Paper –A: Text

The following text is prescribed for intensive study

1. Following Poems from The Chronicles of Time edited by Asha Kadyan (Oxford University Press)
 - a) William Shakespeare
Let Me Not to the Marriage of True Minds
 - b) John Donne
Death Be Not Proud
 - c) John Milton
On His Blindness
 - d) Henry Vaughan
The Retreat
 - e) John Dryden
Shadwell

f) Alexander Pope

Know Then Thyself

g) William Blake

The Little Black Boy

h) William Wordsworth

Three Years She Grew in Sun and Shower

i) Percy Bysshe Shelley

England in 1819

j) Alfred, Lord Tennyson

Crossing the Bar

Part-B: General English

1. Translation from Hindi to English
2. Paragraph Writing
3. Common phrasal verbs, prepositions and common Errors in English

B.SC. HOME SCIENCE
SEMESTER - I
HYGIENE AND PROMOTIVE HEALTH

Course No. : 102

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

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

1. Infections diseases - Causes, symptoms, mode of spread, treatment and prevention.
 - i) Diseases spread through water and food - cholera, diarrhea, hepatitis, and tuberculosis.
 - ii) Diseases spread by insects - Malaria, Dengue
 - iii) Diseases caused by viruses - Polio, measles, chicken pox, cold.
 - iv) Diseases spread by contact and soil - Leprosy, Tetanus.
 - v) Immune Disorders - AIDS.

UNIT - II

2. Personal Hygiene - Physical Health - Regular Habits in daily living, eating and eliminating, cleanliness of body and different organs, rest and sleep.
- 3) Mental Health
- 4) Concept of Positive Health.
- 5) Immunity - Definition and types of immunity, vaccination schedule (Triple Vaccine, BCG, Polio drops etc.)
- 6) School Hygiene - medical Inspection of children (Periodic health Check up)
Public health organization - WHO
- 7) National Health Programmes.
(Malaria Eradication, Leprosy and Tuberculosis, Pulse Polio).

REFERENCES:

1. Hygiene and preventive medicine - Yashpal Bedi.
2. Home Management and Hygiene - Sweera Relhan, Dinesh Pub.

**B.SC. HOME SCIENCE
SEMESTER - I
INTRODUCTION TO TEXTILES**

Course No.: 103

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

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

1. Textiles 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) Synthetic Fibres - Rayon, Nylon, Polyester and Acrylic

UNIT - II

3. Study of Yarn - Methods of spinning, twist, crimp count and types of yarns.
4. Fabric Construction -
 - a) Weaving - Parts of 100m and its working, plain, twill, satin, sateen weave and their variations.
 - b) Knitting - technology, types of knits
 - c) Other methods - Nettling, knotting, felting, braiding, bonding.

REFERENCE:

1. Corbman BP (19810) Textiles Fibre to fabric MC Graw Hill, New York.
2. Hollen N & Saddler J Textiles (Latest Edition) Mac Mittan & Co. New York.
3. Joseph M.L. (1976) Essentials of Textiles holt Ripeniart of Winston, New York.
4. Joseph M.L. (1972) Introductory Textiles Science Holt Ripenhart of Winston, New York.
5. Tortorc P.G. (1978) Understanding Textiles New York Mac Milan Publishing Inc.
6. Wingate (1976) Textiles Fabrics & their selection. Eagle wood cliffs (New Jeggery) Prentice Hall Ins.
7. Znamieroushi, N (1967) step by step weaving, New York, Western Publishing Co. Inc.
8. Plath Pova (1972) The Craft of Hand Weaving New York. Over Publication Co. Ltd.

9. Murray Rosenary (1981) The Essentials handbook of weaving, London Bell and Hyman Ltd.
10. Terry Brackenbury Knitted clothing Technology Blackwell Science Ltd. London.

Practical

1. Identification of Textile fibres - cotton, linen wool, silk, nylon using visual inspection microscopic, burning and chemical tests.
2. Identification of weaves and their variations and collection of their samples.
3. Basic stitches of knitting and following of knitting instructions. Making five sample.
4. To estimate the thread count of fabrics.

**B.SC. HOME SCIENCE
SEMESTER - I
FOOD SCIENCE**

Course No.: 104

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

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. Food - definition, classification and functions.
- B. Basic food groups - composition and nutritional contributions of the following foods:
Cereals;,Pulses ;Fruits and Vegetables;Milk and Milk Products;
Nuts and Oils,Meat; Fish, Poultry and Egg.,Condiments and spices
Sugar and Jaggery

UNIT-II

- A. Cooking:
 - 1. Definition, objectives and principles of cooking of food.
 - 2. Different methods of cooking - their advantages and disadvantages.
 - 3. Effect on nutritive and other values of foods during cooking.
- B. Improving nutritional quality of foods: Germination, Fermentation, Supplementation and Fortification and Enrichment.

REFERENCES:

- 1. Srilakshmi, B. (2001) Food Science (2nd edition). New Age International Pvt. Ltd. Publishers : New Delhi.
- 2. Antia, F.P. (1990) Clinical Dietetics and Nutrition. Oxford Univ. Press : Delhi/Bombay.
- 3. Rajalakshmi, R. (1990) Applied Nutrition (3rd ed.) Oxford and IBH Pub. Co. Pvt. Ltd. : New Delhi.
- 4. Swaminathan, M. (1988). Essentials of Food and Nutrition - An Advanced Text Book Vol. I and II. (2nd ed.) BAPPCO : Bangalore.
- 5. Swaminathan, M. Food Science. BAPPCO : Bangalore.
- 6. Mudambi, S.R. and Rao S. Fundamentals of Food & Nutrition. (2nd ed.) Wiley Eastern Ltd.: New Delhi.

Practical

- A. Controlling Techniques
Weights and measures, standard and household measures for raw and cooked foods.
- B. Common Cookery Terms and their uses in cooking
- C. Preparation of minimum two items of each of the following
Sandwiches;Paranthas/Poories – (simple & stuffed);Egg - Boiled, fried and poached
Rice - Pulao, biryani and sweet rice;Snacks - sweet and salty using different common methods of cooking.
Preparation of food items by fermentation, germination and supplementation (2 each).
Raitas .Beverages - Hot and cold.

**B.SC. HOME SCIENCE
SEMESTER - I
INTRODUCTORY CHEMISTRY**

Course No. 105

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

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

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.

Subatomic particles: Electrons, Protons and Neutrons, Atomic No., Atomic Weight, Bohr's model of an atom.

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 and H-bonding.

Concept of Acids, Bases & Salts, pH and pH Scale Numericals based on pH. Buffer solutions.

UNIT – II

Carbon and its Characteristic : 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 & ketones). Classification of carbon atoms in alkanes.

Soaps and synthetic detergents, advantages and disadvantages.

Synthetic Polymers: Structure and uses of the following polymers (PVC, Teflon, PAN, Nylon - 6, 6 Polyester).

Chemical Composition in Cosmetics: Creams, Perfumes, Talcum Powder, Deodorants, Lipsticks, Nailpolish, Shampoo & 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

1. Preparation of solutions (Normal/Molar). Sodium hydroxide, Sodium Carbonate and Hydrochloric Acid.
2. Preparation of Crystals of Copper Sulphate and Potash 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.
5. Qualitative analysis of Chloride, Nitrate, Acetate, Sulphate, phosphate as acid radicals and Lead, Copper, Aluminium, Nickel and Ammonium as basic radicals.
6. Preparation of Soaps, using any two oils (Coconut oil/castor oil).

**B.SC. HOME SCIENCE
SEMESTER - I
INTRODUCTION TO HUMAN DEVELOPMENT**

Course No.: 106

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

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

1. Human Development - Definition of Development, Growth & Human Development.
2. Historical Trends and Early Concepts in the Field of Child Development.
3. Importance and Scope of Human Development.

UNIT - II

4. Methods of Child Study - observation, interview, questionnaire, case study, experimental, cross-sectional, longitudinal methods.
5. Principles of development and factors affecting growth and development.
6. Lifespan development through different stages and sub stages, different areas of development.

REFERENCES:

1. Hurlock, Elizabeth B. (1987). Developmental Psychology, A life-span approach. Fifth Edition. Tata McGraw Hill Publishing Company Ltd. New Delhi.
2. Hurlock, Elizabeth B. (1987). Child Development Sixth Edition. McGraw Hill Book Co. New Delhi.
3. Berk, Laura E (1999). Child Development. Prentice Hall of India, Private Ltd. New Delhi.
4. Papalie, Diane E. (1986). A child's World. Fourth Edition. McGraw Hill Book Company New Delhi.
5. Ambron S.R. (19710) : Child Development, Rinchart Prep, San Francisco.
6. Lerner Hultsch (1983) : Human Development a life span perspective, New York, McGraw Hill Book, Co.
7. Saraswathi, T.S. & Kaur, B. (1993) : The development of Children, New York : Scientific American Books.
8. Gordon, L.J. (19710), Human Development New York : Harper & Row.

KURUKSHETRA UNIVERSITY, KURUKSHETRA
SYLLABUS FOR THE B.SC. HOME SCIENCE
SEMESTER - II
w.e.f. 2011-12 onwards

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Total
				External	Internal	
1	111	Human Physiology	3 Hrs.	40	10	50
2	112	Prenatal & Infant Growth and Care	3 Hrs.	40	10	50
3	113	Laundry Science and Finishing of Fabrics	3 Hrs.	40	10	50
			3 Hrs.	50		50
		Practical *	3 Hrs.	50		50
4	114	Introductory Home Management	3 Hrs.	40	10	50
10	115	Basic Nutrition	3 Hrs.	40	10	50
		Practical*	3 Hrs	50		50
			3 Hrs	50		50
6	116	Nutritional Biochemistry	3 Hrs	40	10	50
			3 Hrs	50		50
		Practical*	3 Hrs	50		50
7	117	General English		40	10	50
		G.Total				650
		Computer Applications***				

Note: * At the end of Semester-II, the practical examination of I & II Semester will be held together.

** This paper will be studied by the students along with other students of BA/ B. Sc as per university rules.

*** As per university rules.

B.SC. - HOME SCIENCE

SEMESTER-II HUMAN PHYSIOLOGY

Course No. 111

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

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

- The Cell - Animal cell structure, composition of protoplasm. Cell division - mitosis and meiosis, difference between mitosis and meiosis.
- The Skeleton - Different bones - names and number, Joints of the skeleton - names with examples.
- The Digestive system - Structure and functions of various parts of alimentary canal, digestion in the stomach, digestion and absorption in small intestine and large intestine, Digestive glands- functions of liver, pancreas and salivary glands.
- The circulatory system - Composition and functions of blood, structure and functions of heart, blood pressure.

UNIT – II

- The Respiratory system - Respiratory passage - its parts & functions, structure and functions of lungs.
- The Excretory System - Structure and functions of kidneys, mechanism of urine formation.
- The Reproductive System - Structure of reproductive organs in a woman, menstrual cycle.
- The Nervous System - Major parts of the nervous system, structure and functions of brain, spinal cord and nerve cell (Neuron), sense organs - structure of Eye and Ear, Eye defects.

REFERENCES:

1. Chaterzeeee (1988) Human Physiology, Calcutta, Medical Agency.
2. Pears E.C. (1988) Anatomy and Physiology for nurses - Delhi Oxford University, Press.
3. Clothing Textile and Physiology - Ritu Kapoor Vidaya Publications, Ludhiana.
4. A text book of biology - Dhama & Dhama Pradeep Publications.
5. Elementary biology - K N Bhatia

**B.SC. - HOME SCIENCE
SEMESTER-II
PRENATAL AND INFANT GROWTH AND CARE**

Course No.: 112

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

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

1. Development during prenatal stage:
 - a) Conception, signs of pregnancy and physiological changes during pregnancy.
 - b) Factors affecting prenatal development.
2. Stages of prenatal development.
 - a) Prenatal growth and activities in first, second and third trimesters of pregnancy.
 - b) The birth process, stages of delivery, types of birth.
 - c) Discomforts and complications of pregnancy.

UNIT-II

3. The New Born: Physical characteristics of the neonate - size, weight, body-proportions, sensory capacities i.e. hearing, vision, taste, smell, touch, temperature, reflex actions.
4. Care of the infant (0-2 years)
 - a) Physical, motor, social and emotional development.
 - b) Rearing and care of the infant - feeding, weaning, sleeping, bathing and toilet training.
 - c) Common diseases and immunization during infancy.

REFERENCES:

1. Hurlock, Elizabeth B. (1987). Developmental Psychology, A life-span approach. Fifth Edition. Tata McGraw Hill Publishing Company Ltd. New Delhi.
2. Hurlock, Elizabeth B. (1987). Child Development Sixth Edition. McGraw Hill Book Co. New Delhi.

3. Berk, Laura E (1999). Child Development. Prentice Hall of India, Private Ltd. New Delhi.
4. Papalie, Diane E. (1986). A child's World. Fourth Edition. McGraw Hill Book Company New Delhi.
5. Ambron S.R. (19710): Child Development, Rinchart Prep, San Francisco.
6. Lerner Hultsch (1983): Human Development a life span perspective, New York, McGraw Hill Book, Co.

**B.SC. - HOME SCIENCE
SEMESTER-II
LAUNDRY SCIENCE & FINISHING OF FABRICS**

Course No.: 113

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

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

1. Introduction to Laundry process; Laundry equipments and their use.
2. Soaps and supplies: Soaps and detergents; Stiffening Agents; Blueing Agents; Bleaching & other laundry reagents; Grease absorbents & solvents.

UNIT - II

3. Use and care of fabrics.
4. Stains - classification of stains, methods of removing different types of stains.
5. Fabric Finishing -
 - a) Physical - Singing, napping, brushing, and shearing sizing, tentering & Calandring.
 - b) Chemical - Bleaching, Mercerizing
 - c) Special purpose finishes - Wrinkle resistant, water resistant & repellent, flame retardant.

REFERENCE:

1. Corbman BP (19810) Textiles Fibre to fabric MC Graw Hill, New York.
2. Hollen N & Saddler J Textiles (Latest Edition) Mac Mittan & Co. New York.

3. Joseph M.L. (1976) Essentials of Textiles holt Ripeniart of Winston, New York.
4. Joseph M.L. (1972) Introductory Textiles Science Holt Ripenhart of Winston, New York.
5. Tortorc P.G. (1978) Understanding Textiles New York Mac Milan Publishing Inc.
6. Gupta Sushma (20010) Text Book of Clothing Textiles and Laundry. Kalyani Publishers New Delhi.
7. Deulkar Durga (1988) Household Textiles and Laundry Work, Atma Ram and Sons. Kashmiri Gate Delhi – 6

Practical

MM: 50* + 50=100

Duration of Exam: 3*+3 hrs

***First Semester**

1. Stain Removal - Removal of any ten stains.
2. Washing & Finishing of : Cotton (Blouse & Sari, Salwar – Kameez, Gathered Frock Gents Shirt) ; Synthetic (Sari) ; Silk (blouse & Sari); Embroidered Table Cloth; Cushion Covers; Table Napkins/Mat ;Woolen Cardigan /Pullover); Starching of fabrics; Dry Cleaning of Fabrics

**B.SC. - HOME SCIENCE
SEMESTER-II
INTRODUCTORY HOME MANAGEMENT**

Course No.: 114

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

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 the compulsory question.

UNIT - I

- I. Definition, Concept and objectives of home management-
- II. Process of management: Planning, organizing, controlling and evaluating.
- III.
 - a) Family life cycle and stages.
 - b) Qualities and responsibilities of a good home maker.
 - c) Developing managerial abilities/skills.

UNIT - II

- IV. Factors motivating management.
 - a) Values - Definition, classification and characteristics.
 - b) Goals - Definition, classification, characteristics and factors affecting goal setting.
 - c) Standards - Definition, meaning and classification.
- V. Decision making: Definition and importance of decision making. Types of decisions, steps in the process for decision making.
- VI. Resources: Meaning and classification of resources. Brief Introduction of human and non-human resources. Common characteristics of resources influencing their management.

REFERENCES:

1. Gross, E.H., Crandall, E. and Knall M.M. (1973) Management for Modern Families. Prentice Hall, Inc. Englewood Cliff, New Jersey.
2. Nickell, P and Dorsey, JM (1988) Management in Family Living. (4th ed.) Wiley Eastern Ltd. New Delhi.

3. Verghese, MA; Ogale, NN and Srinivasan, K. Home Management. Wiley Eastern, New Delhi.

**B.SC. - HOME SCIENCE
SEMESTER-II
BASIC NUTRITION**

Course No.: 115

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

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. Nutrients in food : Definition, functions, sources, recommended dietary allowances, effects of deficiency and excess (in brief) of Carbohydrates, Proteins, Lipids
- B. Water - Functions and sources of water for human body, effects of excess and low intake of water on human body.
- C. Fibre - Types, functions or role of dietary fibre in the human body, sources.

UNIT-II

- A. Functions, sources, recommended dietary allowances, effects of excess and deficiency (in brief) of: Fat soluble vitamins (A, D, E and K.) and Water soluble vitamins (C, B₁, B₂, B₆, B₁₂ niacin and folic acid).
- B. Functions, Sources, RDA, Effect of Excess and low intake of Macro Minerals (Calcium, Magnesium, Phosphorus, Sodium and Potassium.) and Micro Minerals (Iron, Iodine and fluorine).

REFERENCES:

1. Bamiji, M.S.; Rao, N.P. and Reddy, V. (Editors) (1999) Textbook of Human Nutrition. New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.
2. ICMR (1990) Nutrient Requirements and Recommended Dietary Allowance for Indians. A Report of the Expert Group of ICMR. NIN, Hyderabad.
3. Joshi, S.A. (2002) Nutrition and Dietetics (2nd ed.) New Delhi: Tata Mc Graw Hill Pub. Co. Ltd.
4. Kaushik, V.K. (1998) Readings in Food, Nutrition and Dietetics Vol. I and II. Jaipur Book Enclave.
10. Khanna, K; Gupta, S; Pasi SJ; Seth, R; Mahna, R and Puri, S. (2010) Nutrition and Dietetics. New Delhi: Elite Publishing House.
6. Narsinga Rao BS (1988) Dietary fibre in Indian diets and its nutritional significance. Nutrition Foundation of India Bulletin 9 (4).
7. Robinson CH and Lawler MR (1982) Normal and Therapeutic Nutrition (16th ed) New York : mcMillion Pub. Co. Inc.

Practical

MM: 50* + 50=100

Duration of Exam: 3*+3 hrs

*First Semester

- A. Planning, Calculation and Preparation of the following (2 each)
1. Vitamin A, Iron, Calcium and Protein rich snacks.
- B. Preparation of Minimum two items of each of the following:
Salads, Soups, Desserts, Cakes, Main Course Dishes.

**B.SC. - HOME SCIENCE
SEMESTER-II
NUTRITIONAL BIOCHEMISTRY**

Course No 116

M.M. 40 + 10 = 50

Duration of Exam: 3 Hrs

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 candidate will attempt five questions in all, selecting two questions from each unit and one compulsory question.

UNIT - I

1. Nutrients in food - Definition, classification, structure, general properties, digestion, absorption and metabolism of Carbohydrates, Proteins, Nucleic acids.
Lipids (including iodine number, Acid value and Saponification value).

UNIT - II

2. Chemistry, physiological importance of Fat soluble vitamins (A, D, E and K.) and Water soluble vitamins - B₁, B₂, B₆, B₁₂ niacin, folic acid and vitamin C.
3. Biological role of Macro minerals (calcium, magnesium, phosphorus, sodium and potassium.) and .Micro minerals (Iron, iodine, fluorine, zinc, copper, selenium, cobalt.)
4. Enzymes - Definition, chemical nature, classification, importance and factors affecting enzyme activity. Co-factor, co-enzyme.

REFERENCES:

1. Pant, M.C. (latest edition): Essentials of Biochemistry, Kedar Nath, Ram Nath & Co.
2. Conn. E.E. & Stumfp P.K. (latest edition)
3. Outlines of Biochemistry, Wiley Eastern Pvt. Ltd.
4. Principles of Biochemistry by J.L. Jain
5. Principles of Biochemistry by Leherninger
6. Practical Biochemistry by David T Plummer

Practical

MM: 50* + 50=100
Duration of Exam: 3*+3 hrs
***First Semester**

1. Preparation of solutions of different concentrations and expressing concentrations in different units.
2. Preparation of buffer solution (Acetate buffer-0.2 Molar, pH-10.2).
3. Qualitative analysis of different Carbohydrates, Protein and Lipids
4. Determination of Vitamin C by titrimetric method and fat (demonstration by Soxhlet apparatus). In different food stuff
5. Determination of saponification value and acid value of two different fats or oils.
6. Develop a chromatogram of known amino acids and mixture of amino acids by 2-D paper chromatography.
7. Estimation of chloride in table salt by titrimetric method.

B.SC. HOME SCIENCE

SEMESTER - I I

ENGLISH

Course No. : 117

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

Scheme of the Question Paper

The paper will have seven questions as per details given below

- Q.1. The Candidate will be asked to answer comprehension questions based on an extract from the text book. There will be internal choice.
- Q.2. The candidate will be asked to explain with reference to the context an extract from the text book. There will be internal choice.
- Q.3. There will be five short answer type questions based on the text book. The candidate will be asked to give answers in about 30 words each. There will be internal choice
- Q.4. There will be one essay type question based on the text book with internal choice.
- Q.10. Translation of a passage of about 10 sentences from Hindi to English
- Q.6. Paragraph (The candidate will be required to write about 2100 words on any one of the five given topics).
- Q.7. There will be question with parts on the following items: common phrasal verbs, prepositions, common errors in English

Paper –A: Text

The following text is prescribed for intensive study:

1. Following essays from Ideas Aglow edited by Dinesh Kumar and V.B. Abrol (Publication Bureau, Kurukshetra University, Kurukshetra)
 - a) C.E.M. Joad
Our Civilization
 - b) Jyant V. Narlikar
It's Question Time
 - c) N.Ram
An Interview with Christiaan Barnard
 - d) B.R. Ambedkar
Untouchability and the Caste System
 - e) Huck Gutman
Inhumanisation of War
 - f) Amartya Sen
Seven Types of gender Inquality

Part-B General English

1. Translation from English to Hindi
2. Precis
3. Official Correspondence: Letter Writing.