

**PANJAB UNIVERSITY CHANDIGARH- 160 014 (INDIA)**

(Estded. under the Panjab University Act VII of 1947-enacted by the Govt. of India)



**FACULTY OF SCIENCE**

**SYLLABI**

***FOR***

**B.Sc. Home Science (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> & 4<sup>th</sup> SEMESTER)**

**Common to all streams**

**EXAMINATIONS 2021-22**

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**B.Sc. Home Science – 1<sup>st</sup> Semester**  
**(Common to all Streams)**

Sr. No.	Paper/ Subject	Credit Hours			Theory Marks			Practical Marks			Total
		T	P	Total	Paper	Int. Ass	Total	Paper	Int. Ass.	Total	
1	English Language And Communication Skills	2+2(C)	-	4	90	10	100	-	-	-	100
2	Introduction to Foods & Nutrition -I	2	2	4	45	5	50	40	10	50	100
3	Introduction to Human Development -I	2	2	4	45	5	50	40	10	50	100
4	Introduction to Interior Design & Resource Management -I	2	2	4	45	5	50	40	10	50	100
5	Introduction to Clothing and Textiles -I	2	2	4	45	5	50	40	10	50	100
6	Applied Botany - I	2	2	4	45	5	50	40	10	50	100
7	Applied Zoology -I	2	2	4	45	5	50	40	10	50	100
8	Basics of Computer	-	2	2	-	-	-	40	10	50	50
9*	Environment, Road Safety Education, Violence Against Women And Children and Drug Abuse	2	-	-	-	-	-	-	-	-	-
10	Physical Education/ Music/Dance	-	2	2	-	-	-	Satisfactory/ Unsatisfactory S/US			-
	<b>TOTAL</b>			<b>32</b>							<b>750</b>

**\*The syllabus and marks will be as per Panjab University norms**

**B.Sc. (Home Science) First Semester**

**ENGLISH LANGUAGE AND COMMUNICATION SKILLS**

**(Theory)**

Max. Marks: 100

Theory: 90

Internal Assessment: 10

**Credit Hours: 2+2 (Comp.)/week**

**Duration of Exam: 3 hours**

**Objective:-**

1. To understand the concept of English language and Communication Skills.
2. To test a student's understanding of the text and/or general life-situations, and also devise an effective method of assessing their ability to express themselves in a simple, lucid and correct language.

**Instructions to the Examiner:**

1. There will be one theory paper of **three hours** duration.
2. The question paper will comprise **four** units.

**Unit: I**

**Prose /Stories**

1. The examiner will set *seven* short-answer questions (to be answered in not more than 50-60 words each), from Prose/Story Sections of the prescribed text, out of which a student shall be expected to attempt only *five*.

**(5x 2 =10 Marks)**

2. The examiner shall set five long-answer questions (to be answered in not more than 120-150 words each), from

Prose/Story Sections of the prescribed text, out of which a student shall be expected to attempt only *three*.

**(5 x 3 = 15 Marks)**

**Unit-II**

**Poetry**

3. The examiner will set *seven* short-answer questions (to be answered in not more than 50-60 words each), from Poetry Section of the prescribed text, out of which a student shall be expected to attempt only *five*.

**(5x 2 =10 Marks)**

4. The examiner shall set five long-answer questions (to be answered in not more than 120-150 words each), from Poetry Section of the prescribed text, out of which a student shall be expected to attempt only *three*.

**(3 x 5 = 15 Marks)**

**Unit: III**

**Grammar**

5. This question shall contain *five* incomplete sentences, in which the student will be expected to fill in the blanks with *five* correct prepositions. **(5 Marks)**
6. This question shall contain *five* incomplete sentences, in which the student will be expected to fill in the blanks with *five* correct articles. **(5 Marks)**

**Unit: IV**

**Composition**

7. This question shall be based on the comprehension of an unseen passage, with five questions on the passage, vocabulary and other grammatical items at the end.

**(10 Marks)**

8. The students will be expected to write *one* (formal) letter out of the *two* given: to the editor or to any other Govt. official.

**(10 Marks)**

9. Paragraph Writing (Descriptive)

**(10 Marks)**

*PRESCRIBED TEXT BOOKS: ENGLISH AT WORK*

*POETRY SECTION:*

- *Song 36 from Gitanjali*
- *From Homecoming*
- *Myriad- Winged Bird*
- *I Know Why the caged Bird Sings*

*PROSE SECTION:*

- *Spoken English and Broken English*
- *Principles of Good Writing*
- *The Conjuror's Revenge*
- *I Have A Dream*

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## **B.Sc. HOME SCIENCE FIRST SEMESTER**

### **INTRODUCTION TO FOODS AND NUTRITION - I** **THEORY**

Credit Hours: 2/week

Maximum Marks- 50  
Duration of exam: 3 hours  
Paper- 45  
Internal Assessment-05

#### **INSTRUCTIONS TO EXAMINERS:**

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

#### **OBJECTIVES:**

1. To introduce the concept of different areas of Foods and Nutrition.
2. To gain knowledge about Foods and Nutrition.

#### **UNIT- I**

1. Introduction to Foods and Nutrition
  - Definition of food
  - Functions of Food- physiological, psychological and social
2. Classification of food on the basis of its functions
  - Health, Optimum Nutrition, Malnutrition
  - Basic terminology used in cooking (refer annexure)

#### **UNIT- II**

3. Functions and sources of-
  - Macro nutrients- Carbohydrates, Proteins and Fats
  - Micro nutrients- Minerals: Calcium, Iron and Iodine;  
Vitamins: Fat soluble (A, D, E, K)  
Water soluble (thiamine, riboflavin, niacin, pyridoxine, cyanocobalaminB<sub>12</sub>, ascorbic acid)
4. Functions and sources of-
  - Water
  - Fiber

### UNIT- III

5. Objectives of cooking food
6. Methods of cooking
  - Dry heat, moist heat, cooking with oil
  - solar cooking and microwave cooking
7. Effect of cooking on nutrients

### UNIT IV

8. Meal planning
  - Fundamentals of meal planning
  - Factors affecting meal planning
9. Food safety
  - Basic concept of food adulteration
  - Introduction to food safety laws (PFA, BIS, HACCP, ISO, ISI, FPO, FSSA)

### ANNEXURE (Basic terminology)

- |               |             |             |
|---------------|-------------|-------------|
| a) A la carte | h) Dust     | o) Meringue |
| b) Appetizer  | i) Emulsion | p) Puree    |
| c) Au gratin  | J) Fold in  | q) Roasting |
| d) Batter     | k) Garnish  | r) Saute    |
| e) Blanching  | l) Glaze    | s) Steaming |
| f) Braising   | m) Grilling | t) Whip     |
| g) Croutons   | n) Marinate | u) Zest     |

## B.Sc. HOME SCIENCE FIRST SEMESTER

### INTRODUCTION TO FOODS AND NUTRITION - I PRACTICAL

Credit Hours: 2/week  
Duration of exam: 3 hours

Maximum Marks- 50  
Paper- 40  
Internal Assessment- 10

#### OBJECTIVES:

1. To understand the concepts of weights and measurements (raw and cooked food) and its importance.
2. To acquire skills in food preparation technique of food.
3. To use appropriate methods of cooking for preparation of specific food products.
4. To observe and understand the principals involved in preparation of different foodstuffs.
5. To learn some methods of preservation of foods.
6. To understand the concept of food adulteration.

**CONTENT:**

1. Identification of foods.
2. Weights and measures.
3. Concept of portion cooking
4. Raw and cooked weight of foods.
5. Developing and preparing recipes rich in – proteins, carbohydrates, fat, fibre, calcium, iron, vitamin A and vitamin C.
6. Detecting adulteration in foodstuffs – ghee, honey, coffee, milk, haldi

**RECOMMENDED READINGS:**

1. Discovering Nutrition, Paul Insil, Don Ross, Kimberley McMahon, Melisa Bernstein, Jones and Bartlett Learning, 4<sup>th</sup> Edition, 2012.
2. Food Hygiene and Sanitation, SunetraRoday, Tata McGraw-Hill Education Private Limited, 2011.
3. Food Science and Nutrition, SunetraRoday, Oxford University Press, 2008.
4. Food Science, B. Srilakshmi, New Age International Publishers, 2012.
5. Foods Facts and Principles, N. ShakuntalaManay, M. Shadaksharaswamy, New Age Publishers, 2013.
6. Fundamentals of Meal Management, Margaret McWilliams, Pearson, 2008.
7. Textbook of Nutrition and Dietetics, KumudKhanna, Elite Publishing House Pvt Ltd, 2008.
8. Nutrition and Dietetics, Shubhangini A Joshi, Tata McGraw-Hill Publishing Company Limited, 2009.
9. Basic Food Preparation: A Complete manual, Faculty of Lady Irwin College, Orient Longman publishers, 2008.



## **INTRODUCTION TO HUMAN DEVELOPMENT-I (Theory)**

Credit Hours: 2/week

Maximum Marks: 50  
Paper: 45  
Internal Assessment: 05

### **Instructions for Paper Setter:**

1. Each theory paper will be of three hours duration.
2. Question paper will have four units.
3. A total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
4. Student will attempt one question from each UNIT and the compulsory question (Total of five questions)
5. All questions may carry equal marks, unless specified.

### **Objectives:**

- To introduce concepts of human development to students and link it as an interdisciplinary field.
- To discuss the importance and scope of the study of human development.
- To present the applied perspective on human development.

### **Unit-I**

1. Concept of human development.
2. A brief overview of developmental stages of human Development.

### **Unit-II**

3. Scope of the field of human development.
4. Linkage of human development with other fields.

### **Unit-III**

5. Concept of growth and development.
6. Influence of heredity on human growth and development.

### **Unit-IV**

7. Influence of environment on human growth and development.
8. Influence of environmental deprivation and stimulation on growth and development of children.

### **Recommended Readings:**

1. Berk, L.E (1996). Child Development. New Delhi: Prentice Hall.
2. Bhattacharya, S. (2003). Social Work: An Integrated Approach. New Delhi: Deep & Deep Publications Pvt. Ltd.
3. Craig, G. (1999). Human Development. NJ: Prentice Hall.
4. Cole, M., & Cole, S. (1995). The Development of Children. NY: Freeman & Co.
5. Gardiner, H.W., Mutter, J.D., & Kosmitzki (1998). Lives across cultures. Boston: Allyn & Bacon.
6. Gomango, S.P. (2001). Child Labour – A Precarious Future. New Delhi: Tarun Offset.

### **INTRODUCTION TO HUMAN DEVELOPMENT-I (Practical)**

Max. Marks: 50  
Paper: 40  
Internal Assessment: 10  
Teaching periods: 2/week

### **Instructions to the examiner:**

1. Each practical paper will be of **three hours** duration.
2. The question paper should cover entire syllabus.
3. The file work and viva voce will be of 5 marks each (Total=10 marks).

### **Objectives:**

- To introduce methods of studying human development.
- To acquaint students with issues related to development of infants.
- To present the applied perspective on human development.

### **Content**

1. Observation method
2. Observation of an infant.
3. Preparation of poster on any topic pertaining to human development.
4. Preparation of slogans related to issues of human development.
5. Interview method.
6. Interview of mothers related to their feeding and weaning practices.

### **Recommended Readings:**

1. Berk, L.E (1996). Child Development. New Delhi: Prentice Hall.
2. Craig, G. (1999). Human Development. NJ: Prentice Hall.
3. Cole, M., & Cole, S. (1995). The Development of Children. NY: Freeman & Co.
4. Dacey, J.S. & Travers, J.F. (2002). Human Development across the life span, McGraw Hill, New York.
5. Papalia, Diane E. (1978). Human Development, N.Y.: McGraw Hills Book Company.
6. Santrock, J.W. (2007). Life Span Development. Tata McGraw Hill, New Delhi.

### **INTRODUCTION TO INTERIOR DESIGN & RESOURCE MANAGEMENT-I (THEORY)**

**Maximum Marks: 50**

**Paper - 45**

**Internal Assessment - 05**

**Credit Hours: 2 /week**

**Duration of Exam: 3 hours**

#### **Instructions to the Examiner**

Question paper will have four sections. Examiner will set a total of nine questions comprising of two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Student will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

#### **Objectives**

1. To understand the fundamentals of interior design & resource management in changing scenario.
2. To recognize the importance of process of management in family life.
3. To recognise the contribution of motivation forces and decision making in management process.
4. To understand the elements and principles of design and their application in home interiors.

### **UNIT -I**

1. Meaning & Process of management -  
Planning, Organizing, Controlling and Evaluation
2. Decision Making Process – meaning and steps in Decision Making  
Process

### **UNIT-II**

3. Types of decisions, Factors affecting Decision Making Process
4. Motivating factors in Management -Values, Goals and Standards

### **UNIT-III**

5. Meaning & Importance of Interior design, Role of Interior Designer
6. Career options in Interior Design Management

### **UNIT-IV**

7. Elements of Interior Design – Line, form and shape, colour, texture,  
pattern and their application in Interiors.
8. Principles of Interior Design – Balance, rhythm, harmony,  
proportion, emphasis and their application in Interiors.

## **B.Sc. (Home Science) First Semester**

### **INTRODUCTION TO INTERIOR DESIGN & RESOURCE MANAGEMENT-I (PRACTICAL)**

**Maximum Marks: 50**

**Paper – 40**

**Internal Assessment - 10**

**Credit Hours: 2 /week**

**Duration of Exam: 3 hours**

1. Cleaning of different household articles – Brass, Silver, Glass, Plastic,  
wood
2. Floor decoration – Alpana & Rangoli
3. Goal identification –List down your different types of goals - long term,  
short term and means - end goals.

4. Making a scrap book comprising of pictures depicting elements and principles of art used in interior
5. To plan, organise and execute an event - Birthday/ Festival/ Institutional/ cultural/ Fashion Show.
  - a) Identification of its goal/event and objectives
  - b) Preparing proposal – time schedule, list of invitees, planning for menu
  - c) Planning of resources
  - d) Planning for invitation and decoration
  - e) Budget planning
  - f) Executing an event
  - g) Event evaluation and reporting

### **Recommended Readings**

1. Gross. L. H. and Crandal.E.W.,1967,. Management for Modern Families. Appleton Centurion Crafts, New York.
2. Gupta.S., Garg.N. and Aggarwal.A2004. A Text Book of Family Resources Management , Hygiene and Physiology, Kalyani Publishers, New Delhi,
3. Kaur.H., and Macnell., 1994. Theory and Practice of Home Management. Surjeet Publishers. New Delhi.
4. Mann.K.2004, Home Management for Indian Homes. Kalyani Publishers, New Delhi.
5. Nickell.P. and Dorsey. M.J. 2002 Management in Family Living 4<sup>th</sup> Edition. CBS Publishers
6. Rao. M. P. 2012 Interior Design - Principles and Practice, Standard Publisher Distributor, Delhi.
7. Randhawa R. 2012. Text Book of Family Resource Management and Health Scince, New light Publishers, Jalandhar.
8. Seetharaman P; Batra S. and Mehra P 2005. An Introduction to Family Resource Management. CBS Publishers and distributors, New Delhi
9. Seetharaman P. and Pannu P. 2012. Interior Design and Decoration. CBS Publishers and Distributors, New Delhi
10. The Educational Planning group Delhi. Home Management 1987. Arya Publishing House, New Delhi
11. Varghese A.M; Ogale N.N and Srinivasan K. 2006. Home Management. New Age International Pvt. Ltd Publishers, New Delhi.
12. Veena G. and et. all Introduction to Interior Design & Decoration, Dominant Publishers and Distributors, New Delhi.

**INTRODUCTION TO CLOTHING AND TEXTILES - I  
(THEORY)**

Credit hours -2 /wk

Maximum Marks- 50  
Paper- 45  
Internal Assessment- 05

**Instructions to examiner:**

1. Each theory paper will be of three hours duration
2. Question paper will have four units.
3. A total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
4. Student will attempt one question from each UNIT and the compulsory question (Total of five questions).
5. All questions may carry equal marks, unless specified

**OBJECTIVES:**

To impart knowledge of

- Fibers, sources of fibers and their properties.
- Machines and tools used for sewing.
- Clothing terminology
- Clothing for different age groups.

**Unit-I**

- Classification of textile fibers
- General Fiber Properties – Length, Tenacity, Flexibility, Cohesiveness, Uniformity and Fineness, Crimp, Luster, Density, Elongation, Elasticity, Resiliency, Absorbency, Dyeability, Heat conductivity, Dimensional Stability

**Unit-II**

- Manufacturing Process and properties of natural cellulosic fibers:
  - Cotton
  - Linen
- Manufacturing Process and Properties of natural proteinic fibers:
  - Wool
  - Silk

### Unit-III

- Terminology of Clothing : Grain, Selvedge, Bias, True Bias, Gathers, Dart, Pleats, Tucks, Frills, Flounces, Hemming, Basting, Seam, Seam finishes, Bows, Belts, Trimmings, Fasteners, Bowing, Skewing, Yoke, Facing and Binding.
- Tools and equipments used in clothing construction:
  - Measuring Tools
  - Marking Tools
  - Cutting Tools
  - Sewing Tools
  - Finishing Tools

### Unit-IV

- Sewing machine - its parts and their functions, attachments
- Common sewing machine problems and their remedies

#### **Recommended Readings -**

- Kadolph, Anna,L, Langford, Norma Hollen and Saddler," Textiles", MacMillan Publishing company (1993).
- Corbman, "Textile fiber to Fabric", Mc Graw Hill book company (1983).
- Irene.E. McDermoll and Jeanne.L.Norris, "Opportunities in clothing, Fashion, Merchandising. Chas.A.Bennette Co.Inc, Peoria, Illinois (1968).
- McCall's, "Sewing in colour- Home dressmaking, Tailoring, Mending, soft furnishings, The Hamlyn Publishing group Ltd. (1963).
- Kefgen.M and Touchie.P, "Individuality in clothing selection and personal appearance", MacMillan Publishing Co, Inc.
- Dantyagi.S, "Fundamentals of Textiles and their Care," Orient Longman Ltd, New Delhi.
- "A Reader's Digest Step by Step guide- Sewing and Knitting", Reader's Digest (Australia) Pty Ltd.
- "The complete Book of sewing-A practical step by step guide to sewing techniques" Dorling Kindersley publication, (1996).
- "Singer sewing step by step", CY Decosse, Incorporated Minne Tonka, USA.(1990).
- Tortora, P," Understanding Textiles", Macmillan Publishing Co. Inc., New York, (1978).
- Trotman,E.R., "Dyeing and Chemical Technology and Textile fibers", B .I. Publications Pvt. Ltd.,New Delhi, (1994).

## INTRODUCTION TO CLOTHING AND TEXTILES - I (Practical)

Credit hours -2 /wk  
Duration of exam -3 hrs

Maximum Marks- 50  
Paper- 40  
Internal Assessment- 10

### ***Instructions to examiner***

1. *There will be four questions in all, two questions from each unit.*
2. *All questions will carry equal marks.*

### **OBJECTIVES:**

To enable the students to-

- Identify fibers.
- Make samples of basic construction techniques.

### **UNIT-I**

#### **Clothing**

- Basic hand stitches- Basting, Hemming-visible/invisible, Tailor's tack.
- Practice exercise of Basic seams.
- Types of Seam and self finished seams- Plain, Run and fell, French, lapped.
- Types of Seam Finishes- Overlock, Hand overcasting, Turned and Stitched, Binding

### **Unit-II**

#### **Textile**

Fibre Identification:

- Cellulosic fibers
  - Cotton
  - Linen
- Proteinic fibers
  - Silk
  - Wool

#### **Recommended Readings -**

- "The complete Book of sewing-A practical step by step guide to sewing techniques"  
Dorling Kindersley publication, (1996).
- "Singer sewing step by step", CY Decosse, Incorporated Minne Tonka, USA.(1990).

**Subject- Applied Botany-I (Theory)**



**Duration of Exam- 3 Hrs**  
**Credit Hours: 2 Hrs. / per week**

**Max.Marks :50**  
**Exam. Theory: 45**  
**Internal Assessment: 05**

**INSTRUCTION TO THE EXAMINER:**

1. Each theory paper will be of three hours duration.
2. Question Paper will have **Four** sections.
3. Student will attempt one Question from each section and the compulsory Questions.
4. One Compulsory Question of **9(Nine) marks** can be set covering the whole syllabus which can be fill in the blank/ multiple choice/ objective type/ one word answer e.t.c.
5. At least two Questions from each unit may be set. Each Question is of **9(Nine)** marks.
6. Total of **Five** Questions to be attempted.

**OBJECTIVES:**

- To introduce basic concepts about gardening.
- To impart knowledge of propagation of plants by seeds and by other Vegetative methods.
- To impart knowledge about plants which are of economic importance.
- To impart knowledge about growing vegetables, fruits & flowers.

**Unit-I**

- Study of different types of soil:-
  - Clay
  - Sand
  - Loam
  - Gravel
  - Alluvial
  - Peat
  
- Study of different Soil Operations:-

- Tillage
  - Drainage
  - Hoeing & Mulching
  - Irrigation
- Inorganic N,P,K Fertilizers

- Organic Manures:-

- Farm yard Manure
- Compost
- Leaf Mould Manure
- Green Manure
- Poultry & Pigeon Manure
- Soot

### **Unit-II**

- Seed Propagation.
- Vegetative propagation by artificial methods-
  - Cutting,
  - layering,
  - grafting
  - budding.
- Vermicompost.

### **Unit-III**

- Elementary Knowledge about plant tissue culture.
- Elementary Knowledge about Mushroom Cultivation.
- Biofertilizers.

### **Unit-IV**

- BOTANTICAL NAME, FAMILY, DISTRIBUTION, PART USED & USES OF THE FOLLOWING:
  - Fibres: Cotton, Jute & Flax
  - Oils: Coconut, Mustard, Ground Nut, Castor Oil & linseed.
  - Condiments and Spices: Clove, Cinnamon, Cumin, Cardamom, Coriander, Fennel, Pepper & Turmeric.

**RECOMMENDED READINGS:-**

1. B. Choudhary: Vegetables (National Book of India, New Delhi 1979)
2. Breikell C. 1993, Step by Step Gardening Technique (Royal Horticultural Society's Encyclopedia of Practical Gardening).
3. Dutta A.C. Botany for Degree Students (Oxford University Press, New Delhi 1970)
4. Gangullee H.C. Dass, K.S. Dass, K.S. Dutta C: College Botany Vol. I (New Central Book Agency Calcutta 1991)
5. Gopaldaswamianger K.S. 1991 Complete Gardening in India (Messers Nagaraj and Co., Madras).
6. H.T. Harman and D Keter: Plant Propagation, Principles and Practices (Prentice Hall of India Pvt. Ltd. New Delhi 1979).
7. Hind Book of Agriculture: ICAR, New Delhi 1987.
8. J.L. Shreemali Economic Botany (Har Anand Publication, New Delhi 1995)
9. O.P. Sharma: Hill's Economic Botany 2006 Tata McGraw-Hill Publishing Co. Ltd.
10. Robert W. Sehery: Plants for man (Prentice Hall Incorporation 1972 New Delhi.
11. Sham Singh: Fruit Cultivation in India.
12. Sudhir Pardhan: Economic Botany (Kitab Mahal, Allahabad 1982).
13. Sh. S.K. Jain: Medicinal Plants: 2008 ( National Book Trust, India).
14. Sh. V. Verma : A text Book of Economic Botany 1984. Emkay Publication.

**B.Sc.(Home Science)      Part-I First Semester**  
**Subject- Applied Botany-I (Practical)**

**Duration of Exam- 3 Hrs**

**Credit Hours: 2 Hrs. / per week**

**Max.Marks :50**

**Exam. Theory: 40**

**Internal Assessment: 10**

1. Study of Microscope.
2. Preparation of temporary slides of onion peel to study the cell structure.
3. Study of Garden implements (Garden Tools & accessories).
4. To prepare a pot for sowing seeds and study different seed sowing methods.
5. To prepare a pot for reporting of chrysanthemum.
6. i) Propagation of roses by cutting.  
ii) Propagation of crotons & coleus by cutting
7. i) Propagation by whip & tongue grafting.  
ii) Propagation by wedge grafting.
8. Economic Botany:- Identify Name, Family, Distribution, Parts used and uses of the following:-
  - i) Fibres: Cotton, Jute & flax.
  - ii) Oils: Mustard, groundnut, Castor, Coconut & linsed.
  - iii) Condiments & Spices: Clove, cardamom, cinnamon, cumin, coriander, fennel, pepper & turmeric

### **RECOMMENDED READINGS:-**

1. B. Choudhary: Vegetables (National Book of India, New Delhi 1979)
2. Breikell C. 1993, Step by Step Gardening Technique (Royal Horticultural Society's Encyclopedia of Practical Gardening).
3. Dutta A.C. Botany for Degree Students (Oxford University Press, New Delhi 1970)
4. Gangullee H.C. Dass, K.S. Dass, K.S. Dutta C: College Botany Vol. I (New Central Book Agency Calcutta 1991)
5. Gopaldaswamianger K.S. 1991 Complete Gardening in India (Messers Nagaraj and Co., Madras).
6. H.T. Harman and D Keter: Plant Propagation, Principles and Practices (Prentice Hall of India Pvt. Ltd. New Delhi 1979).
7. Hind Book of Agriculture: ICAR, New Delhi 1987.
8. J.L. Shreemali Economic Botany (Har Anand Publication, New Delhi 1995)
9. O.P. Sharma: Hill's Economic Botany 2006 Tata McGraw-Hill Publishing Co. Ltd.
10. Robert W. Sehery: Plants for man (Prentice Hall Incorporation 1972 New Delhi.
11. Sham Singh: Fruit Cultivation in India.
12. Sudhir Pardhan: Economic Botany (Kitab Mahal, Allahabad 1982).
13. Sh. S.K. Jain: Medicinal Plants: 2008 ( National Book Trust, India).
14. Sh. V. Verma : A text Book of Economic Botany 1984. Emkay Publication.

**B.Sc. Home Science (Pass Course) Semester-I**  
**APPLIED ZOOLOGY-I**  
**(THEORY)**

**Credit Hours** : 2 hours/ week

**Duration of Exam** : 3 hours

**Total marks** : 50

**Paper (Theory)** : 45

**Internal Assessment** : 05

**INSTRUCTIONS FOR EXAMINER: FOR THEORY**

1. Total nine questions to be set (at least two from each unit) which also includes
2. One compulsory question containing 9 short questions of 1 marks each, covering the whole syllabus.
3. All the questions carry 9 marks each.

**INSTRUCTIONS FOR STUDENTS: FOR THEORY**

1. Five questions to be attempted.
2. At least one from each unit need to be attempted.
3. One question (containing 9 Short answer questions) is compulsory as mentioned in the question paper.

**OBJECTIVES:** To provide knowledge regarding the application of Zoology in day to day life.

**UNIT- I**

An elementary study of the following animals as indicated:

1. Malaria parasite: Detail life history and mode of transmission.
2. *Entamoeba histolytica* and *Entamoeba coli*: Habit distribution ,disease produced and mode of transmission.
3. *Trypanosoma gambiense* and *Leishmania dononani* : Habit distribution ,disease produced and mode of transmission.
4. *Taenia solium*, *Ascaris lumbricoides*: External feature life history , disease caused and mode of transmission.
5. *Fasciola hepatica* and *Wuchereria bancrofti*: life history , disease caused and mode of transmission .

**Unit-II**

An elementary study of Insect Pest

6. Life history and economic importance of insect pest: Rice Weevil (*Sytophillus*), Lesser Grain Borer(*Rizopertha*), Gram Dhora(*Callosobruchus*), and Rust Red Flour Beetle (*Tribolium*).
7. Control of insect pest : Cockroach, Termite.
8. Grain Storage: Principles of toxicology with reference to home.
9. Habit habitat and life history only: Mosquito( *Culex* & *Anopheles*).

### UNIT-III

Economic important insect and Earthworm

10. Honey bee: Habit habitat and life history only.
11. Silk moth: Habit habitat and life history only.
12. Lac insect: Habit habitat and life history only
13. External feature life history and economic importance of Earthworm

### Unit-IV

14. Elementary knowledge of Apiculture.
15. Elementary knowledge of Sericulture.
16. Elementary knowledge of Vermiculture.
17. Elementary knowledge of Poultry( important breed of poultry, selection of breed, Housing, Feeding and common ailment such as Ranikhet, coccidiosis, fowlpox and fowl cholera, only)
18. Elementary knowledge of Prevention of Bird flue.
19. Elementary knowledge of composite and integrated fish (cultivation of major carps only) culture in pond only (excluding induced breeding).

### **B.Sc. Home Science (Pass Course) Semester-I** **APPLIED ZOOLOGY-I** **(PRACTICAL)**

***Credit Hours*** : 2 hours/ week  
***Duration of Exam*** : 3 hours

***Total marks*** : 50  
***Paper (Theory)*** : 40  
***Internal Assessment*** : 10

1. Phylum based identification and Economic importance of Invertebrates and Vertebrates present in the laboratory.
2. Identification of slides and specimens: Malaria parasite( *Plasmodium*), *Fasciola hepatica*( life stages also), *Ascaris*, *Taenia solium*, .
3. Identification of available insect pest and their life stages.
4. Preparation of temporary mounts of mouth parts of cockroach
5. Visit to Poultry farm.
6. Vermiculture.
7. Project report on field visit to renowned poultry

## **B.Sc. Home Science (Pass Course) Semester-I**

### **Books Recommended**

1. Dhami, PS: A text Book of Zoology for 11<sup>th</sup> & 12<sup>th</sup> students(2000)
2. Prasad,S.N.: Invertebrate Zoology(1980)
3. Parker Hasewell: Vertibrate Zoology(1967)
4. Jordan,E.L. & Verma,P.S.: Invertebrate Zoology(1973)
5. Vidyarthi,R.D.:A text book of Zoology for intermediate students (1998).
6. Delela&Verma: A text book of Cytology (1987)
7. Sardar Singh: Bee- Keeping in India, ICAR(1972).
8. Kalyanan, N.P: Common insect of India(1967).
9. Venkita Raman: A text book of Economic Zoology(1990)
10. Naidu,P.M.N.: Poultry keeping in India(1976),ICAR
11. Shukla & Upadhy: Economic Zoology.
12. Lal S.S.: Practical Zoology, Invertebrate.
13. Lal S.S.: Practical Zoology, Vertebrate.
14. Kotpal R.L.: Modern Text Book of Zoology Invertebrate.
15. Kotpal R.L.: Modern Text Book of Zoology Vertebrate.

## **B.Sc. (Home Science) First Semester**

### **BASICS OF COMPUTER**

#### **(PRACTICAL)**

Credit Hours: - 2 / Week  
Duration of Exam: - 03 Hours

Maximum Marks - 50  
Paper – 40  
Internal Assessment - 10

#### **Objective:**

1. To impart basic computer knowledge to students.
2. To enable the students to concept of fundamentals and its applications.

#### **Instructions for paper setters:**

- There will two questions in all from Section –II only.
- One question will be set from Sr. No. 1 carrying 20 marks.
- One question will be set from Sr. No. 02 carrying 20 marks.
- Each question can be sub divided into according to the Practical



**Section-I**  
**(THEORITICAL BACKGROUND TO BE DONE IN PRACTICAL CLASSES)**

1. Introduction to Computer: Definition, Generation, Classification of computers, Configurations of computers, Computer software and hardware. Computer peripherals.
2. Computer memory: Types, Main memory, Secondary memory, Introduction to Secondary storage devices.

**Section II**  
**(PACTICAL)**

1. Using Windows: Windows Basics; Start Windows; Using different windows simultaneously; Moving through windows and mouse; Maximize/Minimize windows; Use of help feature; Exit windows; Starting an application; Copy, Move, Delete files/ Directories, Creating Directories. Reaming files and directories.
2. Word Processing Package: Basics of Word Processing; Text Selection, Opening Documents and Creating Documents, Saving Documents/Quitting Documents, Cursor control, Printing and Replacing Text, Spell Check Feature/Autocorrect feature, Grammar facility, Retrieving often used text; Auto text character formatting, Page formatting; Document Enhancement: Adding Borders and shading, Adding Headers and Footers, Setting up Multiple columns, Shorting locks, Adjusting Margins and Hyphenating Documents, Creating Master Documents, Data Source, Merging Documents, Using Mail merge feature for labels and envelopes: Graphics and Using Templates and wizards.
3. Presentation Packages: Basics, General Features, Creating a presentation, Working with slides, Inserting images, Video, Audio Clips, Indents and line spacing, Slide animations transactions, Manual and Automatic slide show, Color themes etc.

**Recommended Readings:-**

1. Pradeep K. Sinha, Priti Sinha, "Computer fundamentals" BPB Publications, New Delhi, 2011.
2. Mandeep Handa, Virnder Singh "Windows based Computer courses" ABS Publications, Jalandhar, 2011.
3. Suresh K. Basanra, "Computer Today" Galgotia Publications, New Delhi, 2008.
4. Ikvinderpal Singh, Baljinder Singh "Windows Based Computer Courses" Khanna Book Publications Co. (P) Ltd. 2011.

**B.SC. (HOME SCIENCE) FIRST SEMESTER**  
**Physical Education**  
**(Practical)**

**Credit Hours: 2 Hrs. /week**

**Grade: S/US**

**Duration of Exam: 3 hours**

**Instruction to the Examiner:**

The examiner shall consider annual assignment of the student, physical education practical file, take practical exam & viva voce based on syllabus for grading the students performance in the examination.

**Objectives:**

1. Wholesome development of an individual.
2. Knowledge of basic techniques involved in athletic events.
3. Practical knowledge of techniques and skills involved in various games out of syllabus.
4. Knowledge and benefit of yoga in day to day life.

UNIT-I

Athletics: Brief knowledge of track and field events. Layout of Track, Short Distance Races (including relay race)

- [a] Technique for start, finishing and during running in a race.
- [b] General fouls in track events.

UNIT- II

Field Event: Throw: Shot put

- [a] Dimension of the circle and specification of equipment used
- [b] Techniques of putting a shot
- [c] Fouls of throwing events.

UNIT- III

Anyone game from the following games:

- [a] Badminton
- [b] Kho- Kho
- [c] Volleyball
- [d] Hockey
- [e] Yoga

UNIT - IV

- [a] Brief knowledge of Asian Games and current national records in Athletics
- [b] Knowledge of prominent players of the games in syllabus

**REFERENCES:**

1. A Text Book of Physical Education and Sports by Atwal and Kansal.
2. Rule Book of Athletics by Amateur Athletic Federation of India.
3. Rule Book of Badminton by Badminton Federation of India.
4. Rules Book of Kho-Kho by Kho-Kho Federation of India.

5. Rule Book of Volley Ball by Volley Ball Federation of India.
6. Rule Book of Hockey by Hockey Federation of India
7. Various search engines found on internet.

## **B.SC. (HOME SCIENCE) FIRST SEMESTER**

### **MUSIC (VOCAL) (Practical)**

**Credit Hours :2 Hrs/week**  
**Duration of Exam: 3 hours**

**Grade: S/US**

#### **Instruction to the Examiner:**

The examiner shall consider, music practical file, practical based on syllabus and viva-voce for grading the students performance.

#### **Objectives:**

- Introduction of *swara, raga, taal, alamkars*.
  - To develop interest in Classical Music
1. Two fast khayals with Alap and Taans of the following Ragas:
    - a) Bilawal
    - b) Kafi
  2. One Lakhsan geet in any raag of the prescribed syllabus
  3. The following Taalas with Ekgun and Dugun with Bols on hand.
    - a) Teen taal
    - b) Dadra taal
  4. Life sketches of musicians:
    - a) Pandit Ravi Shankar
    - b) Pandit Bheem Sen Joshi

#### **REFERENCES:**

1. Harish Chander Shrivastava (1993): Rag Prichaya Part – II, Sangeet Sadan Parkashan, 88, South Malaka, Allahabad.
2. Harish Chander Shrivastava (1993) : Rag Prichaya Part – III, Sangeet Sadan Parkashan, 134, South Malaka, Allahabad.
3. Pandit Vishnu Narayan Bharkande (1989): Hindustani Sangeet Padhhti Part II Sangeet Karyalaya, Hathras (UP).
4. Pandit Vishnu Narayan Bharkande (1988): Hindustani Sangeet Padhhti Part III Sangeet Karyalaya, Hathras (UP).
5. Lakshmi Narayan Garg: Hindustani Sangeet Padhhti Part III Sangeet Karyalaya, Hathras (UP).
6. Shri Prabhu Lal Garg Basant: Sangeet Karyalaya, Hathras (UP).
7. Search engines on internet.

## **B.SC. (HOME SCIENCE) FIRST SEMESTER**

**DANCE  
(Practical)**

**Credit Hours :2 Hrs/week**  
**Duration of Exam: 3 hours**

**Grade: S/US**

**Instruction to the Examiner:**

The examiner shall consider, dance practical file, practical based on syllabus and viva-voce for grading the students performance.

**Objectives:**

- Wholesome development of an individual.
  - Introduction to *laya* and *taal*
1. Teen taal: Tatkar in single, dugun and chaugun laykaries  
Namaskar:1, Amad:1, Tora:2, Paran:1, Chakardaar Paran:2, Kavita:1
  2. Practical demonstration of ten hand movements with their function
  3. Ability to play Teen taal on tabla
  4. Description of various Gharanas of Kathak.

**REFERENCES:**

1. Kathak Nritya Shiksha Part-I, by Puru Dadhich
2. Kathak Nritya Shiksha Part-II, by Puru Dadhich

**B.Sc. Home Science – 2nd Semester  
(Common to all Streams)**

Sr. No.	Paper/ Subject	Credit Hours			Theory Marks			Practical Marks			Total
		T	P	Total	Paper	Int. Ass.	Total	Paper	Int. Ass.	Total	
1	English Language And Communication Skills	2+2(C)	-	4	90	10	100	-	-	-	100
2	Introduction to Foods & Nutrition -II	2	2	4	45	5	50	40	10	50	100
3	Introduction to Human Development-II	2	2	4	45	5	50	40	10	50	100
4	Introduction to Interior Design & Resource Management -II	2	2	4	45	5	50	40	10	50	100
5	Introduction to Clothing and Textiles -II	2	2	4	45	5	50	40	10	50	100
6	Applied Botany - II	2	2	4	45	5	50	40	10	50	100
7	Applied Zoology -II	2	2	4	45	5	50	40	10	50	100
8	Computer Applications	-	2	2	-	-	-	40	10	50	50
9*	Environment, Road Safety Education And Violence Against Women And Children	2	-	-	-	-	-	-	-	-	-
10	Physical Education/Music/ Dance	-	2	2	-	-	-	Satisfactory/ Unsatisfactory S/US			-
	<b>TOTAL</b>			<b>32</b>							<b>750</b>

\*The syllabus and marks will be as per Panjab University norms

## **ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN & CHILDREN and Drug Abuse (SEMESTER – II)**

\* Total duration of the whole paper(Consisting of four parts) shall be of 2 hours, carrying 100 marks in whole, divided into the ratios of 40:20:20:20

**Note: The syllabus has 15 topics to be covered in 20 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.**

### **1. Environment Concept:**

Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

### **2. Atmosphere:**

Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

### **3. Hydrosphere:**

Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

### **4. Lithosphere:**

Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

### **5. Forests:**

Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

### **6. Conservation of Environment:**

The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

### **7. Management of Solid Waste:**

Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

### **8. Indoor Environment:**

Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

## **9. Global Environmental Issues:**

Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

## **10. Indian Laws on Environment:**

Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

## **11. Biodiversity:**

What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

## **12. Noise and Microbial Pollution:**

Pollution due to noise and microbes and their effects.

## **13. Human Population and Environment:**

Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

## **14. Social Issues:**

Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

## **15. Local Environmental Issues:**

Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

## **Practical**

**Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.**

## **Examination Pattern:**

A qualifying paper of 40 marks comprising of forty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

## **UNIT II (ROAD SAFETY)**

Concept and Significance of Road Safety.

Role of Traffic Police in Road Safety.

Traffic Engineering – Concept & Significance.

Traffic Rules & Traffic Signs.

How to obtain Driving License.

Traffic Offences, Penalties and Procedures.

Common Driving mistakes.

Significance of First-aid in Road Safety.

Role of Civil Society in Road Safety.

Traffic Police-Public Relationship.

### **Note : Examination Pattern :**

Road Safety paper is 20 marks.

Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10. The entire syllabus of Unit II is to be covered in 10 hours.

All the questions are to be attempted.

Qualifying Marks 33 per cent

The paper setter is requested to set the questions strictly according to the syllabus.

### **Suggested Readings**

The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd.,  
New Delhi.

Road Safety Signage and Signs (2011), Ministry of Road Transport and  
Highways, Government of India.



**Websites:**

[www.chandigarhpolice.nic.in](http://www.chandigarhpolice.nic.in)

[www.punjabpolice.gov.in](http://www.punjabpolice.gov.in)

[www.haryanapolice.gov.in](http://www.haryanapolice.gov.in)

[www.hppolice.nic.in](http://www.hppolice.nic.in)

**SYLLABUS ON “VIOLENCE AGAINST WOMEN & CHILDREN” AT UNDER-GRADUATE LEVEL**

**UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION**

**AS PART OF SEMESTER - II**

**Unit – III**

**VIOLENCE AGAINST WOMEN & CHILDREN**

Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women: Dowry Death – Section 304B;

Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E; Cruelty – Section 498A;

Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509 of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);

Hurt & Grievous Hurt Provisions – Sections 319 to 326; Acid Attacks – Sections 326A and 326B;

Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women’s consent) and section 314;

Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts

of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

Protective Laws for Women:

**3.1** Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

**3.2** The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

**4.** Protective Provisions of IPC regarding Sexual Violence against Children:

Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361 (kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

**4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.**

**Note: Instructions for Examination:**

Unit III of the paper dealing with Violence against Women and Children is of 20 Marks. It shall have 20 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions). Minimum two questions from each topic must be covered.

All the questions are to be attempted  
Qualifying Marks 33 percent

Duration of Examination 30 Minutes

The Paper Setter is requested to set the questions strictly according to the syllabus.

**Pedagogy:**

The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.

The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

## **RELEVANT READING MATERIAL**

Ahuja, Ram (1998), Violence against Women, New Delhi: Rawat Publication  
NRHM, Child Abuse, A Guidebook for the Media on Sexual Violence against Children  
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).  
The Protection of Children from Sexual Offences Act, 2012  
The Protection of Women from Domestic Violence Act 2005  
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013  
UNO, United Nations Secretary-General's Study on Violence against Children, adapted for Children and Young People

### **Unit –IV**

#### **Drug Abuse**

##### **UNIT IV (Drug abuse: problem, prevention and management)**

###### **1. Problem of drug abuse**

Meaning and concept; types of drugs often misused; antibiotics, steroids and their misuse with suitable examples; habit forming drugs and their effects; drug addiction; drug tolerance and withdrawal symptoms; various signs and symptoms of drug abuse; vulnerable groups (age, gender and socio-economic status)

###### **2. Prevention and management of drug abuse**

Medical treatment through deaddiction center, support of family, media and school education; Government policies, programs and laws to prevent drug abuse.

##### **Instructions to the examiners**

1. Unit IV of the paper dealing with Drug abuse would be of 20 marks comprising of twenty multiple choice questions carrying one mark each having four options a, b, c, d with one correct and three incorrect alternatives.
2. The question paper shall be set strictly according to the syllabus uniformly
3. All the questions are to be attempted

**Note: The teaching hours for the Unit IV will be 10 hours**

##### **Suggested readings**

1. Kapoor T (1985) Drug epidemic among Indian Youth. New Delhi: Mittal Pub
2. Modi, Ishwar and Modi, Shalini (1997) Drugs: addiction and prevention, Jaipur: Rawat publications
3. World drug Report 2019, Booklet 1, Executive summary, United Nations Office of drug and crime
4. Bansal R and Kumar A (2020) Drug abuse, addiction and recovery

**B.Sc. (Home Science) Second Semester**

**ENGLISH LANGUAGE AND COMMUNICATION SKILLS**

**(Theory)**

Max. Marks: 100

Theory: 90

Internal Assessment: 10

**Credit Hours : 2+2 (Comp.)/week**

**Duration of Exam: 3 hours**

**Objective:-**

1. To understand the concept of English language and Communication Skills.
2. To test a student's understanding of the text and/or general life-situations, and also devise an effective method of assessing their ability to express themselves in a simple, lucid and correct language.

**Instructions to the Examiner:**

1. There will be one theory paper of **three hours** duration.
2. The question paper will comprise **four** units.

**Unit: I**

**Prose /Stories**

3. The examiner will set *seven* short-answer questions (to be answered in not more than 50-60 words each), from Prose/Story Sections of the prescribed text, out of which a student shall be expected to attempt only *five*.

**(5x 2 =10 Marks)**

4. The examiner shall set five long-answer questions (to be answered in not more than 120-150 words each), from Prose/Story

Sections of the prescribed text, out of which a student shall be expected to attempt only *three*.

**(5 x 3 = 15 Marks)**

**Unit-II  
Poetry**

5. The examiner will set *seven* short-answer questions (to be answered in not more than 50-60 words each), from Poetry Section of the prescribed text, out of which a student shall be expected to attempt only *five*.

**(5x 2 =10 Marks)**

6. The examiner shall set five long-answer questions (to be answered in not more than 120-150 words each), from Poetry Section of the prescribed text, out of which a student shall be expected to attempt only *three*.

**(3 x 5 = 15 Marks)**

**Unit: III  
Grammar**

7. This question shall contain *five* pairs of homophones which the students would be expected to use in sentences of their own so as to bring out the difference in their meaning.

**(10 Marks)**

8. The students will be asked to correct *ten* sentences or choose the correct sentences out of the given pairs or use the correct form of the verbs in the given sentences.

**(10 Marks)**

**Unit: IV  
Composition**

9. The students will be expected to write *one* (informal) letter out of the *two* given.

**(10 Marks)**

10. Report Writing (On a given situation/incident) **(10 Marks)**

*PRESCRIBED TEXT BOOKS: ENGLISH AT WORK*

*POETRY SECTION:*

- *Telephonic Conversation*
- *Dover Beach*
- *Anthem For Doomed Youth*
- *The Unknown Citizen*

*PROSE SECTION:*

- *Letter To A Teacher*
- *The Best Investment I Ever Made*
- *Taking The Law Into Their Hands*
- *The Elixir Of Life*

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**B.Sc. HOME SCIENCE SECOND SEMESTER**

**INTRODUCTION TO FOODS AND NUTRITION - II**

**THEORY**

Credit Hours: 2/week  
Duration of exam: 3 hours

Maximum Marks- 50  
Paper- 45  
Internal Assessment-05

**INSTRUCTIONS TO EXAMINERS:**

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

**OBJECTIVES:**

1. To introduce the concept of different areas of Foods and Nutrition.
2. To gain knowledge about Foods and Nutrition.

## UNIT- I

1. Study of the food groups with respect to their classification, basic composition and nutritive content
  - Cereals
  - Pulses and legumes
  - Fruits and vegetables
  - Fats and oils
  - Sugar and jaggery
2. Beverages- tea, coffee, cocoa

## UNIT- II

3. Study of the food groups with respect to their classification, basic composition and nutritive content
  - Milk and milk products
  - Eggs, meat, fish and poultry
  - Nuts and oil seeds
4. Food storage:
  - Introduction and general guidelines for safe food storage
  - Dry food storage
  - Refrigerated store
  - Freezer storage

## UNIT- III

5. Balanced Diet
  - Definition and concept
  - Factors affecting balanced diet
6. RDA – definition
  - Reference man and woman
  - Food pyramid

## UNIT IV

7. Food Preservation-
  - Definition and importance
  - Food spoilage causes and factors affecting it
  - Principles of food preservation
8. Methods of preservation – household and commercial

## **B.Sc. HOME SCIENCE SECOND SEMESTER**

### **INTRODUCTION TO FOODS AND NUTRITION - II**

#### **PRACTICAL**

Credit Hours: 2/week  
Duration of exam: 3 hours

Maximum Marks- 50  
Paper- 40  
Internal Assessment- 10

#### **OBJECTIVES:**

1. To understand the concepts of weights and measurements (raw and cooked food) and its importance.
2. To acquire skills in food preparation technique of food.
3. To use appropriate methods of cooking for preparation of specific food products.
4. To observe and understand the principals involved in preparation of different foodstuffs.
5. To learn some methods of preservation of foods.
6. To understand the concept of food adulteration.

#### **CONTENT:**

1. Food preparation according to different food groups –
  - Cereals and cereal products
  - Pulses – husked, de - husked
  - Vegetables and fruits
  - Milk and milk products
2. Beverages preparation
3. Demonstration of preparation of jams, murrabba, pickles for preservation

#### **RECOMMENDED READINGS:**

1. Discovering Nutrition, Paul Insil, Don Ross, Kimberley McMahon, Melisa Bernstein, Jones and Bartlett Learning, 4<sup>th</sup> Edition, 2012.
2. Food Hygiene and Sanitation, SunetraRoday, Tata McGraw-Hill Education Private Limited, 2011.
3. Food Science and Nutrition, SunetraRoday, Oxford University Press, 2008.
4. Food Science, B. Srilakshmi, New Age International Publishers, 2012.
5. Foods Facts and Principles, N. ShakuntalaManay, M. Shadaksharaswamy, New Age Publishers,2013.
6. Fundamentals of Meal Management, Margaret McWilliams, Pearson, 2008.
7. Textbook of Nutrition and Dietetics, KumudKhanna, Elite Publishing House Pvt Ltd, 2008.
8. Nutrition and Dietetics, Shubhangini A Joshi, Tata McGraw-Hill Publishing Company Limited, 2009.
9. Basic Food Preparation: A Complete manual, Faculty ofLlady Irwin College, Orient Longman publishers, 2008.



**INTRODUCTION TO HUMAN DEVELOPMENT-II  
(Theory)**

Credit Hours: 2/week  
Time: 3 Hours

Maximum Marks: 50  
Paper: 45  
Internal Assessment: 05

**Instructions for Paper Setter:**

1. Each theory paper will be of three hours duration.
2. Question paper will have four section/UNITs.
3. A total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
4. Student will attempt one question from each UNIT and the compulsory question (Total of five questions)
5. All questions may carry equal marks, unless specified.

**Objectives:**

- To introduce concepts of human development to students and link it as an interdisciplinary field.
- To discuss the importance and scope of the study of human development.
- To present the applied perspective on human development.

**Unit-I**

1. The beginning of human life, stages of prenatal period.
2. Factors influencing prenatal development.

**Unit-II**

3. Types of child birth.
4. Complications during child birth.

**Unit-III**

5. Reflexes of Infants.
6. Milestones of motor development from 0-2 years.

**Unit-IV**

7. Factors affecting physical development of infants.
8. Pattern of physical growth and development from 0-2 years.

### **Recommended Readings:**

1. Berk, L.E (1996). Child Development. New Delhi: Prentice Hall.
2. Bhattacharya, S. (2003). Social Work: An Integrated Approach. New Delhi: Deep & Deep Publications Pvt. Ltd.
3. Craig, G. (1999). Human Development. NJ: Prentice Hall.
4. Cole, M., & Cole, S. (1995). The Development of Children. NY: Freeman & Co.
5. Gardiner, H.W., Mutter, J.D., & Kosmitzki (1998). Lives across cultures. Boston: Allyn & Bacon.
6. Gomango, S.P. (2001). Child Labour – A Precarious Future. New Delhi: Tarun Offset.

### **INTRODUCTION TO HUMAN DEVELOPMENT-II (Practical)**

Max. Marks: 50  
Paper: 40  
Internal Assessment: 10  
Teaching periods: 2/week

### **Instructions for Paper-setter:**

1. Each practical paper will be of **three hours** duration.
2. The question paper should cover entire syllabus.
3. The file work and viva voce will be of 5 marks each (Total=10 marks).

### **Objectives:**

- To introduce methods of studying human development.
- To acquaint students with issues related to development of infants.
- To present the applied perspective on human development.

### **Content**

1. Questionnaire method.
2. Preparation of a questionnaire on any issue related to pregnancy.
3. Recording of reflexes of newborn babies.
4. Preparation of a file with collection of traditional practices, rituals and lullabies used while rearing up infants.
5. Preparation of resource material/audio visual aids/ toys to enhance physical development of infants.

### **Recommended Readings:**

1. Berk, L.E (1996). Child Development. New Delhi: Prentice Hall.
2. Craig, G. (1999). Human Development. NJ: Prentice Hall.
3. Cole, M., & Cole, S. (1995). The Development of Children. NY: Freeman & Co.
4. Dacey, J.S. & Travels, J.F. (2002). Human Development across the life span, Mc Graw Hill, New York.
5. Papalia, Daine E. (1978). Human Development, NY: Mc Graw Hill Book Company.
6. Santrock, J.W. (2007). Life Span Development. Tata McGraw Hill, New Delhi.

### **B.Sc. (Home Science) Second Semester**

#### **INTRODUCTION TO INTERIOR DESIGN & RESOURCE MANAGEMENT-II (THEORY)**

**Maximum Marks: 50**

**Paper - 45**

**Internal Assessment - 05**

**Credit Hours: 2 /week**

**Duration of Exam: 3 hours**

#### **Instructions to the Examiner**

Question paper will have four sections. Examiner will set a total of nine questions comprising of two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Student will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

#### **Objectives**

1. To understand the fundamentals of interior design & resource management in changing scenario.
2. To recognize the importance of resources and maximizing & conserving their use in order to achieve goals.
3. To understand the elements and principles of design and their application in home interiors.
4. To understand the importance of colour in interiors.

### **UNIT-I**

1. Meaning & Classification of resources – Human, Non-human and Shared resources
2. Factors affecting the use of resources

### **UNIT-II**

3. Money- Types of income, steps in budget planning, advantages and limitations of budget planning.
4. Time - Steps in time plan, tools in time management

### **UNIT-III**

5. Energy- Classification of efforts used in homemaking activities and Fatigue
6. Work simplification - Its meaning and principles of work simplification.

### **UNIT-IV**

7. Colour – classification of colours & properties of colour, colour wheel.
8. Colour schemes and Emotional effects of colours

## **B.Sc. (Home Science) Second Semester**

### **INTRODUCTION TO INTERIOR DESIGN & RESOURCE MANAGEMENT-II (PRACTICAL)**

**Maximum Marks: 50**

**Paper – 40**

**Internal Assessment - 10**

**Credit Hours: 2 /week**

**Duration of Exam: 3 hours**

1. Table setting for different meals  
Table manners and Napkin folding
2. Budget planning for different income groups

3. Making of colour wheel
  - a) Showing primary, secondary and tertiary colours
  - b) Properties of Colours - Value, Intensity, Warm colours & Cool colours
  - c) Showing different colours scheme
4. Making a scrap book comprising of pictures depicting different colour schemes and analysing

### **Recommended Readings**

1. Gross. L. H. and Crandal.E.W.,1967,. Management for Modern Families. Appleton Centurion Crafts, New York.
2. Gupta.S., Garg.N. and Aggarwal.A2004. A Text Book of Family Resources Management , Hygiene and Physiology, Kalyani Publishers, New Delhi,
3. Kaur.H., and Macnell., 1994. Theory and Practice of Home Management. Surjeet Publishers. New Delhi.
4. Mann.K.2004, Home Management for Indian Homes. Kalyani Publishers, New Delhi.
5. Nickell.P. and Dorsey. M.J. 2002 Management in Family Living 4<sup>th</sup> Edition. CBS Publishers
6. Rao. M. P. 2012 Interior Design - Principles and Practice, Standard Publisher Distributor, Delhi.
7. Randhawa R. 2012. Text Book of Family Resource Management and Health Scince, New light Publishers, Jalandhar.
8. Seetharaman P; Batra S. and Mehra P 2005. An Introduction to Family Resource Management. CBS Publishers and distributors, New Delhi
9. Seetharaman P. and Pannu P. 2012. Interior Design and Decoration. CBS Publishers and Distributors, New Delhi
10. The Educational Planning group Delhi. Home Management 1987. Arya Publishing House, New Delhi
11. Varghese A.M; Ogale N.N and Srinivasan K. 2006. Home Management. New Age International Pvt. Ltd Publishers, New Delhi.
12. Veena G. and et. all Introduction to Interior Design & Decoration, Dominant Publishers and Distributors, New Delhi.

**B.Sc. Home Science Second Semester**  
**INTRODUCTION TO CLOTHING AND TEXTILES - II**  
**(THEORY)**

Credit hours -2 /wk

Maximum Marks- 50  
Paper- 45  
Internal Assessment- 05

**Instructions for Paper Setter:**

1. Each theory paper will be of three hours duration.
2. Question paper will have four units.
3. A total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
4. Student will attempt one question from each UNIT and the compulsory question (Total of five question).
5. All question may carry marks, unless specified.

**OBJECTIVES:**

To impart knowledge of

- Fibers, sources of fibers and their properties.
- Machines and tools used for sewing.
- Clothing terminology
- Clothing for different age groups.

**Unit-I**

- Manufacturing process and properties of Man-made fibers :
  - Regenerated Cellulosic Fibers  
Viscose Rayon  
Acetate

**Unit-II**

- Manufacturing process and properties of Man-made fibers
  - Synthetic Fibers  
Polyester  
Nylon

### Unit-III

Factors affecting selection of clothing:

- Age
- Season
- Income
- Occasion
- Occupation
- Sex
- Fashion

### Unit-IV

Clothing for different age groups with special reference to fabrics, colours, style and details:

- Infants
- Toddlers
- Pre-school children
- Adolescents
- Adults
- Elderly

#### **Recommended Readings -**

- Kadolph, Anna,L, Langford, Norma Hollen and Saddler," Textiles", MacMillan Publishing company (1993).
- Corbman, "Textile fiber to Fabric", Mc Graw Hill book company (1983).
- Irene.E. McDermoll and Jeanne.L.Norris, "Opportunities in clothing, Fashion, Merchandising. Chas.A.Bennette Co.Inc, Peoria, Illinois (1968).
- McCall's, "Sewing in colour- Home dressmaking, Tailoring, Mending, soft furnishings, The Hamlyn Publishing group Ltd. (1963).
- Kefgen.M and Touchie.P, "Individuality in clothing selection and personal appearance", MacMillan Publishing Co, Inc.
- Dantyagi.S, "Fundamentals of Textiles and their Care," Orient Longman Ltd, New Delhi.
- "A Reader's Digest Step by Step guide- Sewing and Knitting", Reader's Digest (Australia) Pty Ltd.
- "The complete Book of sewing-A practical step by step guide to sewing techniques" Dorling Kindersley publication, (1996).

## **INTRODUCTION TO CLOTHING AND TEXTILES -II (Practical)**

Credit hours -2 /wk  
Duration of exam -3 hrs

Maximum marks- 50  
Paper- 40  
Internal Assessment-10

### ***Instructions to examiner***

1. *There will be four questions in all, two questions from each unit.*
2. *All questions will carry equal marks.*

### **OBJECTIVES:**

To enable the students to-

- Identify fibers.
- Identify stains and their removal.
- Make samples of basic construction techniques.

### **UNIT-I**

#### **Clothing**

Making samples of-

- Fullness- Types of Darts, Tucks, Pleats, Gathers.
- Neckline Finishes-Binding, Facing.
- Fasteners- Button, Buttonhole, Hook and eye, Press Button.

### **Unit-II**

#### **Textile**

Fibre identification:

- Regenerated Cellulosic fibers
  - Viscous rayon
  - Acetate rayon
- Synthetic fibers
  - Nylon
  - Polyester
  - Stain Removal

### **Recommended Readings -**

- “The complete Book of sewing-A practical step by step guide to sewing techniques”  
Dorling Kindersley publication, (1996).
- “Singer sewing step by step”, CY Decosse, Incorporated Minne Tonka, USA.(1990).



**B.Sc. (Home Science )Part-I (Second Semester)**  
**Subject- Applied Botany-II (Theory)**

**Duration of Exam- 3 Hrs**

**Credit Hours: 2 Hrs. / per week**

**Max.Marks :50**

**Exam. Theory: 45**

**Internal Assessment: 05**

**INSTRUCTION TO THE EXAMINER:**

1. Each theory paper will be of three hours duration.
2. Question Paper will have **Four** sections.
3. Student will attempt one Question from each section and the compulsory Questions.
4. One Compulsory Question of **9(Nine) marks** can be set covering the whole syllabus which can be fill in the blank/ multiple choice/ objective type/ one word answer e.t.c.
5. At least two Questions from each unit may be set. Each Question is of **9(Nine)** marks.
6. Total of **Five** Questions to be attempted.

**OBJECTIVES:**

- To introduce basic concepts about gardening.
- To impart knowledge of propagation of plants by seeds and by other Vegetative methods.
- To impart knowledge about plants which are of economic importance.
- To impart knowledge about growing vegetables, fruits & flowers.

**UNIT-I**

- Principle and planning of kitchen garden.
- Principle and planning in laying out of a garden.
- Cultivation and Care of Lawns.

**Unit-II**

- Elementary knowledge about cultivation, care & maintenance of common Indoor foliage plants like crotons.
- Elementary Knowledge about cultivation , care & maintenance of Bonsai
- Elementary Knowledge about cultivation, care & maintenance of Coleus.

### UNIT-III

- Elementary knowledge about types, cultivation, care and maintenance of Roses
- Cultivation and Care of Hedges.
- Elementary Knowledge about cultivation, care of Chrysanthemums.

### UNIT-IV

- BOTANTICAL NAME, FAMILY, DISTRIBUTION, PART USED & USES OF THE FOLLOWING:-
  - Beverages: Tea, Coffee & Cocoa
  - Medicinal Plants: Holy basil ,Mint, Ashwagandha, Amaltas, Aloe vera & Amla
  - Plant dyes: Henna, Indigo & Pomegranate

### RECOMMENDED READINGS

1. B. Choudhary: Vegetables (National Book of India, New Delhi 1979)
2. Breikell C. 1993, Step by Step Gardening Technique (Royal Horticultural Society's Encyclopedia of Practical Gardening).
3. Dutta A.C. Botany for Degree Students (Oxford University Press, New Delhi 1970)
4. Gangullee H.C. Dass, K.S. Dass, K.S. Dutta C: College Botany Vol. I (New Central Book Agency Calcutta 1991)
5. Gopalswamianger K.S. 1991 Complete Gardening in India (Messers Nagaraj and Co., Madras).
6. H.T. Harman and D Keter: Plant Propagation, Principles and Practices (Prentice Hall of India Pvt. Ltd. New Delhi 1979).
7. Hind Book of Agriculture: ICAR, New Delhi 1987.
8. J.L. Shreemali Economic Botany (Har Anand Publication, New Delhi 1995)
9. O.P. Sharma: Hill's Economic Botany 2006 Tata McGraw-Hill Publishing Co. Ltd.
10. Robert W. Sehery:Plants for man (Prentice Hall Incorporation 1972 New Delhi.
11. Sham Singh: Fruit Cultivation in India.
12. Sudhir Pardhan: Economic Botany (Kitab Mahal, Allahabad 1982).
13. Sh. S.K. Jain: Medicinal Plants: 2008 ( National Book Trust, India).
14. Sh. V. Verma : A text Book of Economic Botany 1984. Emkay Publication.

**B.Sc. Home Science (Pass Course) Semester-II**  
**APPLIED BOTANY-II**  
**(PRACTICAL)**

<i>Duration of Exam</i> : 3 Hours	<i>Max marks</i> : 50
<i>Credit Hours</i> : 2 hours/week	<i>Paper (Theory)</i> : 40
	<i>Internal Assessment</i> : 10

1. Preparation of temporary slides of Rhoecyrtus peel to study the cell structure, stomata and chloroplast.
2. To prepare a seed bed for raising seedlings.
3. To prepare a bed for sowing and cultivation of Potato.
4. To prepare a bed for transplanting vegetables like onion, cauliflower, Brinjal & tomato.
5. To demonstrate propagation of plants by layering method:-
  - Air Layering
  - Ground Layering
6. To demonstrate propagation of roses by budding
7. Maintenance of plants – hoeing, mulching, weeding, staking & tying.
8. Economic Botany:- Identify Name, Family, Distribution, Parts used and uses of the following:-
  - (i) Beverages: Tea, Coffee & Cocoa
  - (ii) Medicinal Plants: Tulsi, Mint, Amla, Ashwagandha, Aloe vera & Amaltas
  - (iii) Plant Dye: Henna, Indigo & Pomegranate
    - Herbarium: Collection of 25 specimens of ornamental plants
    - Visit of herbal parks and forest to study flora in natural habitat, if possible.

**RECOMMENDED READINGS**

1. B. Choudhary: Vegetables (National Book of India, New Delhi, 1979).
2. Breikell C. 1993, Step by Step Gardening Technique (Royal Horticultural Society's Encyclopedia of Practical Gardening).
3. Dutta A. C. Botany for Degree Students (Oxford University Press, New Delhi, 1970).
4. Gangullee H.C. Dass, K.S. Dass, K.S. Dutta C: College Botany Vol. I (New Central Book Agency Calcutta 1991).
5. Gopaldaswaminager K.S. 1991 Complete Gardening in India (Messers Nagaraj and Co., Madras).

6. H.T. Harman and D Deter: Plant Propagation, Principles and Practices (Prentice Hall of India Pvt Ltd. New Delhi 1979)
7. Hind Book of Agriculture : ICAR, New Delhi, 1987.
8. J.L. Shreemali Economics Botany (Har Anand Publication, New Delhi 1995).
9. O.P. Sharma : Hill's Economic Botany 2006 Tata McGraw-Hill Publishing Co., Ltd.
10. Robert W. Sehery : Plants for man (Prentice Hall Incorporation 1972 New Delhi).
11. Sham Singh : Fruit Cultivation in India.
12. Sudhir Pardhan: Economic Botany (Kitab Mahal, Allahabad, 1982).
13. Sh. S. K. Jain: Medicinal Plants : 2008 (National Book Trust, India).
14. Sh. V. Verma: A Text Book of Economic Botany 1984, Emkay Publication.

**B.Sc. Home Science (Pass Course) Semester-II**  
**APPLIED ZOOLOGY-II**  
**(THEORY)**

*Credit Hours : 2 hours/ week*  
*Duration of Exam : 3 hours*

*Total marks : 50*  
*Paper (Theory) : 45*  
*Internal Assessment : 05*

**INSTRUCTIONS FOR EXAMINER: FOR THEORY**

1. Total nine questions to be set (at least two from each unit) which also includes
2. One compulsory question containing 9 short questions of 1 marks each, covering the whole syllabus.
3. All the questions carry 9 marks each.

**INSTRUCTIONS FOR STUDENTS: FOR THEORY**

4. Five questions to be attempted.
5. At least one from each unit need to be attempted.
6. One question (containing 9 Short answer questions) is compulsory as mentioned in the question paper.

**OBJECTIVES:** To provide knowledge regarding the application of Zoology in day to day life.

**UNIT- I**

1. An Elementary Knowledge of Structure and Function of DNA.
2. An Elementary Knowledge of Structure of RNA.
3. Chromosomal theory of heredity.
4. An Elementary Knowledge of Structure of human Chromosomes their variation.

**UNIT- II**

5. Heredity-
  - Simple Inheritance(According to Mandel-law)
  - Monohybrid and dihybrid cross
  - Incomplete inheritance
6. Human genetics
  - An Elementary knowledge ABO and Rh Blood groupings.
  - An Elementary knowledge of Genetic basis of blood groups( ABO and Rh)
7. Hereditary Diseases
  - An Elementary Knowledge of Autosomal and sex chromosomal abnormalities.

- An Elementary knowledge of Genetic basis of common hereditary diseases such as Haemophilia, Colour-blindness, Mongolism, Diabetes, Thalassemia

### UNIT-III

8. An elementary knowledge of Gene, Genome and Genomic.
9. An elementary knowledge of Genetic engineering.
10. An elementary knowledge of Transgenic product -Bt-Products, Golden Rice, Flavr-Savor Tomato.
11. An elementary Knowledge of Polymerase Chain Reaction(PCR)

### Unit-IV

12. An elementary knowledge of Biotechnology.
13. An elementary knowledge of Stem cell research.
14. An elementary knowledge of AIDS and its control.
15. An elementary Knowledge of Forensic DNA Diagnostics.
16. An elementary Knowledge of Swine Flu.

### B.Sc. Home Science (Pass Course) Part-II APPLIED ZOOLOGY-II ( PRACTICAL)

*Credit Hours : 2 hours/ week*  
*Duration of Exam : 3 hours*

*Total marks : 50*  
*Paper (Theory) : 40*  
*Internal Assessment : 10*

1. Blood grouping( ABO)
2. Measurement of Blood pressure (Demonstration).
3. Demonstration of Extraction of DNA.
4. Demonstration of submarine Electrophoresis of extracted DNA in Agarose Gel.
5. Demonstration of Visualization of Extracted DNA by staining it with Ethidium Bromide.
6. Demonstration of Polymerase Chain Reaction(PCR)
7. Project report on visit to renowned laboratory/Institute

## B.Sc. Home Science (Pass Course) Part-II

### Books Recommended

1. Dhami, PS: A text Book of Zoology for 11<sup>th</sup> & 12<sup>th</sup> students(2000)
2. Prasad,S.N.: Invertebrate Zoology(1980)
3. Vidyarthi,R.D.:A text book of Zoology for intermediate students (1998).
4. Benzamin Lewin: Gene VIII(2005)
5. Lodish, Berk, Matsudairy, Kaiser,Krieger, Scott, Zipursky,Darnell: Molecular Cell Biology(2003)
6. Delela&Verma: A text book of Cytology (1987)
7. Elot Axel Carlson: Human Genetics(1985).
8. Edmund W. Sinnott, L.C. Dunn and Theodosius Dobzhansky : Principals of Genetics(1973)
9. Dubey,R.C.: Biotechnology(2000)
10. Herren, R.W.: Introduction to Biotechnology.
11. Gupta P K.: Cytology Genetics Evolution and Ecology.
12. Hames B.D.,Hooper N.M. & Houghton J.D.: Instant Notes in Biochemistry

## B.Sc. (Home Science) Second Semester COMPUTER APPLICATION (PRACTICAL)

Credit Hours: - 2 / Week  
Duration of Exam: - 03 Hours

Maximum Marks - 50  
Paper – 40  
Internal Assessment - 10

### Objective:

1. To impart computer knowledge to students through practical.

### Instructions for paper setters:

- There will two questions in all from Section –II only.
- One question will be set from Sr. No. 1 carrying 20 marks.
- One question will be set from Sr. No. 02 carrying 20 marks.
- Each question can be sub divided into according to the Practical

## Section I

### THEORETICAL BACKGROUND TO BE DONE IN PRACTICAL CLASSES

1. Computer Memory in details, secondary storage device HDD, CD, DVD, Pen Drive etc.

2. Operating System (OS), Introduction, Function of OS ,Types of OS, Working of OS in brief
3. Current trends internet, WWW, elements of WWW, client, server, web browser, web site, hyperlink, configuration and applications, search engines.

## **Section II**

### **PRACTICAL**

1. Spreadsheet Package: Worksheet Basics, Data Entry in Cells : Entry of numbers, text and formulae, Moving data in a worksheet, Moving around in a worksheet, Selecting Data Range, Using the interface (Toolbars, Menus) Editing Basics, Working with workbooks, Saving and Quitting, Cell referencing; Formatting and Calculations : Calculations and worksheets- using Auto fill, Working with Formulae, Efficient Data Display with Data formatting (number formatting, data formatting etc.), Working with Ranges, Worksheet Printing; Working with Graphs and Charts: Adding/Formatting Text Data with Auto format, creating Embedded Chart using chart wizard, sizing and moving parts, updating charts, Changing chart types, Creating separate charts, Chart wizard, Adding Titles, Legends and Gridlines, Printing Charts; Database Management; finding records with Data form, Adding/ Deleting Records, Filtering Records in a worksheet; Functions and Macro: Worksheet with worksheet function using function-wizard, Creating Macros, Record Macros, Running Macros, Assigning Macros to Buttons, Multiple worksheets and scanners.
2. Internet and its applications, URL, Email (Creating new mail account, sending mail, attachments etc.), search engines, file downloading and saving of file. Writing CD, DVD in different formats using CD or DVD writing software's. Data transfer to or from Solid state devices.

### **Recommended Readings:-**

1. Pradeep K. Sinha, Priti Sinha, "Computer fundamentals" BPB Publications, New Delhi,2011.
2. Mandeep Handa, Virnder Singh "Windows based Computer courses" ABS Publications, Jalandhar, 2011.
3. Suresh K. Basanra, "Computer Today" Galgotia Publications, New Delhi, 2008.
4. Ikvinderpal Singh, Baljinder Singh "Windows Based Computer Courses" Khanna Book Publications Co. (P) Ltd. 2011.



**B.SC. (HOME SCIENCE) SECOND SEMESTER**  
**Physical Education**  
**(Practical)**

**Credit Hours: 2 Hrs. /week**  
**Duration of Exam: 3 hours**

**Grade: S/US**

**Instruction to the Examiner:**

The examiner shall consider annual assignment of the student, physical education practical file, take practical exam & viva voce based on syllabus for grading the students performance in the examination.

**Objectives:**

1. Wholesome development of an individual.
2. Knowledge of basic techniques involved in athletic events.
3. Practical knowledge of techniques and skills involved in various games out of syllabus.
4. Knowledge and benefit of yoga in day to day life.

UNIT-I

Athletics: Brief knowledge of track and field events. Layout and marking of Track, Middle Distance Races

- [a] Technique for start, finishing and during running in a race.
- [b] General fouls in track events.

UNIT- II

Field Event: Throw: Discus Throw

- [a] Dimension of the circle and specification of equipment used
- [b] Techniques of putting a shot
- [c] Fouls of throwing events.

UNIT- III

Anyone game from the following games:

- [a] Badminton
- [b] Kho- Kho
- [c] Volleyball
- [d] Hockey
- [e] Yoga

UNIT - IV

- [a] Brief knowledge of Olympic Games
- [b] Olympic records and World records in Athletic events.
- [c] Knowledge of prominent players of the games in syllabus
- [d] Brief knowledge of Awards and Honors in Various Games.

**REFERENCES:**

1. A Text Book of Physical Education and Sports by Atwal and Kansal.
2. Rule Book of Athletics by Amateur Athletic Federation of India.
3. Rule Book of Badminton by Badminton Federation of India.

4. Rules Book of Kho-Kho by Kho-Kho Federation of India.
5. Rule Book of Volley Ball by Volley Ball Federation of India.
6. Rule Book of Hockey by Hockey Federation of India
7. Various search engines found on internet.

## **B.SC. (HOME SCIENCE) SECOND SEMESTER**

### **MUSIC (VOCAL) (Practical)**

**Credit Hours :2 Hrs/week**  
**Duration of Exam: 3 hours**

**Grade: S/US**

#### **Instruction to the Examiner:**

The examiner shall consider, music practical file, practical based on syllabus and viva-voce for grading the students performance.

#### **Objectives:**

- Introduction of *swara, raga, taal, alamkars*.
  - To develop interest in Classical Music
- 1 Two fast khayals with Alap and Taans of the following Ragas:
    - a) Yaman
    - b) Bhopali
  - 2 One Lakhsan geet in any raag of the prescribed syllabus
  - 3 The following Taalas with Ekgun and Dugun with Bols on hand.
    - a) Kehrwa taal
    - b) Rupak taal
  - 4 Life sketches of musicians:
    - a) Pandit Hari Prasad Chourasia
    - b) Pandit Jasraj

#### **REFERENCES:**

1. Harish Chander Shrivastava (1993): Rag Prichaya Part – II, Sangeet Sadan Parkashan, 88, South Malaka, Allahabad.
2. Harish Chander Shrivastava (1993) : Rag Prichaya Part – III, Sangeet Sadan Parkashan, 134, South Malaka, Allahabad.
3. Pandit Vishnu Narayan Bharkande (1989): Hindustani Sangeet Padhhti Part II Sangeet Karyalaya, Hathras (UP).
4. Pandit Vishnu Narayan Bharkande (1988): Hindustani Sangeet Padhhti Part III Sangeet Karyalaya, Hathras (UP).
5. Lakshmi Narayan Garg: Hindustani Sangeet Padhhti Part III Sangeet Karyalaya, Hathras (UP).
6. Shri Prabhu Lal Garg Basant: Sangeet Karyalaya, Hathras (UP).
7. Search engines on internet.

## B.SC. (HOME SCIENCE) SECOND SEMESTER

### DANCE (Practical)

**Credit Hours :2 Hrs/week**  
**Duration of Exam: 3 hours**

**Grade: S/US**

#### **Instruction to the Examiner:**

The examiner shall consider, dance practical file, practical based on syllabus and viva-voce for grading the students performance.

#### **Objectives:**

- Wholesome development of an individual.
  - Introduction to *laya* and *taal*
1. Jhap taal: Tatkar in single, dugun and chaugun layakaries  
Amad:1, Tora:4, Paran:2, Kavita:1
  2. Practical demonstration of ten hand movements with their function
  3. Ability to play Teen taal on tabla.
  4. Life sketches of Pandit Uday Shankar ji or Pandit Sundar Prasad ji with their contributions in promoting Kathak dance

#### REFERENCES:

1. Kathak Nritya Shiksha Part-I, by Dr. Puru Dadhich
2. Kathak Nritya Shiksha Part-II, by Dr. Puru Dadhich

### B.Sc. (Home Science)3<sup>rd</sup> Semester

Sr. No.	Paper/ Subject	Credit Hours			Theory Marks			Practical Marks			Total
		T	P	Total	Paper	Int. Ass	Total	Paper	Int. Ass.	Total	
1	Art in Everyday life	2	2	4	45	5	50	20	05	25	75
2	Applied Nutrition- I	2	2	4	45	5	50	20	05	25	75
3	Development in Infancy	2	2	4	45	5	50	20	05	25	75
4	Interior Furnishing	2	2	4	45	5	50	20	05	25	75
5	Fabric Construction	2	2	4	45	5	50	20	05	25	75
6	Applied Physics -I	2	2	4	45	5	50	20	05	25	75
7	Applied Chemistry -I	2	2	4	45	5	50	20	05	25	75
8	Physiology and Promotive Health -I	2	-	2	45	5	50	-	-	-	50
9	Physical Education, Music & Dance	-	2	2	-	-	-	Satisfactory/ Unsatisfactory S/US			-
	<b>TOTAL</b>			<b>32</b>							<b>575</b>

**B.Sc. (Home Science)3<sup>rd</sup> Semester**

**ART IN EVERYDAY LIFE  
(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Instruction to the examiner:**

1. Question paper will have four sections.
2. Examiner will set a total of nine questions comprising of two questions from each unit and one compulsory question of short answer type covering the whole syllabus.
3. Students will attempt one question from each unit and the compulsory question.
4. All questions may carry equal marks unless specified.

**OBJECTIVES:-**

**To enables students-**

- a) To gain better understanding of the application of Art Principles in interiors.
- b) To understand the elements of Art and Design as applied to daily life.
- c) To gather information regarding technologies and materials used for interiors.

**UNIT-I**

- a) ART and its Importance.
- b) Utility and Functions of Art in everyday life.
- c) Composition and its importance.

**UNIT- II**

- a) Elements of Art-Define, Line, Shape, Texture, Value and Color.
- b) Principles of Art-Balance, Unity, Repetition, Contrast, Dominance and Harmony
- (c) Designs- its importance and types.

**UNIT- III**

- (a) Colour system, colour effect.
- (b) Warmth and coolness of the colour.
- (c) Psychological Impact of colors in interiors and on Human beings.

**UNIT- IV**

- (a) Properties of colors- Value, intensity, hue.
- (b) Value of colors to increase and decrease the illusion.
- (c) Tints, tones and shades

**B.Sc. (Home Science) 3<sup>rd</sup> Semester**

**ART IN EVERYDAY LIFE  
(PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

**Instruction to the examiner:**

- The examiner will set a total of three questions from the syllabus. Students will attempt any one question from the three questions set.

**OBJECTIVES:-**

**To enables students-**

- a) To gain better understanding of the application of Art Principles in interiors
- b) To understand the elements of Art and Design as applied to daily life
- c) To gather information and understand and enjoy visual arts.

**Contents:**

1. Preparation of sheets showing elements of art.
2. Preparation of sheets showing principles of art.
3. Colour Wheel, colour schemes(monochromatic, complementary, constructing, related hues)
4. Types of colours- Primary, Secondary, Tertiary, Cool and Warm Colours.
5. Optical illusions created by lines and colours.
6. Making simple landscapes in different mediums of coloring.
7. (Posters, Water, steadlers, Pastels and pencil shading)
8. Use of various methods and techniques to create simple designs for menu and greeting cards.
9. Creating paintings, wall hangings, pots, toys (stuffed and waste material) etc.
10. Form- study of forms-functional and non- functional.
11. Still life
12. Importance of 3- dimensional designs

## REFERENCES

1. Art in Everyday Life- Harriet Goldstein Mac Millan Co. New York.
2. Rendering with Pen & Ink- Robert W. Gill (Thames and Hudson Manual).
3. Colour Trends- Vol. I, Ethnic, Japanesque, High- Tech Colours, AIM Creative Products Pvt. Ltd.
4. Colour –A Guide to basic facts and concepts, John Wiley & Sons, New York.
5. A brief history of Indian Painting- Dr. L.C. Sharma, Publishing House Meerut.
6. A Hand Book of Indian Art, Sunil Khosa, Sundeep Prakashan Delhi.
7. Elements of Indian Art, S.P. Gupta, Shashi Prabha Asthana, D.K. Print World, New Delhi.
8. Ajanta Murals – A Ghosh, Archeological Survey of India- New Delhi.
9. Art and Illusion- E.H. Gombrich, PHAIDON Press London.
10. Sedona – Rosenstiel’s Publishers, 2005, Fine Art Publishers, London.
11. Silver- Rosenstil’s Publishers, 2005, Fine Art Publishers, London.

## **B.Sc. (Home Science) 3rd Semester**

### **APPLIED NUTRITION - I (THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

#### **Objectives:**

1. To elucidate the applied concepts of different areas of foods and nutrition.
2. Acquire knowledge about the nutritional needs and concerns of specific age groups/physiological conditions.

#### **Instruction to the paper setter:**

1. Each theory paper will be of three hours duration.
2. Questions paper will have four section and units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Students will attempt one question from each unit and the compulsory question (Total of five questions).
4. All questions may carry equal marks, unless specified.

#### **UNIT – I**

1. Concept of nutrition transition.
2. Recommended Dietary Allowances:
  - Concept of minimum nutrient requirements and recommended dietary allowances

#### **UNIT- II**

3. Classification, digestion, absorption, RDA, deficiency and excess:
  - Carbohydrates - Monosaccharide, Disaccharides, Polysaccharides
4. Classification, digestion, absorption, RDA, deficiency and excess:
  - Proteins - complete, partially complete, incomplete
  - Concept of essential non essential amino acids

#### **UNIT- III**

5. Classification, digestion, absorption, RDA, deficiency and excess:
  - Fats - saturated, unsaturated
6. Recommended Dietary Allowances, deficiency and excess:
  - Vitamins- fat soluble- A,D,E,K



## UNIT –IV

### 7. Recommended Dietary Allowances, deficiency and excess:

- Vitamins - water soluble-Thiamine, Riboflavin, Niacin, Pyridoxine and C

### 8. Recommended Dietary Allowances, deficiency and excess:

- Minerals- calcium, iron, iodine

### RECOMMENDED READINGS:

- Guthrie, A. H. (1986): Introductory Nutrition, 6th Ed., The C.V Mosby Company.
- Swaminathan, M (1991): Essentials of Food and Nutrition, vols. I and II. Ganesh and Co. Madras.
- Gopalan, C. et al., (1991): Nutritive Value of Indian Foods, Indian Council of Medical Research.
- Indian Council of Medical Research (1989): Nutrient Requirements and Recommended Dietary Allowances for Indian, New Delhi.
- FAO/WHO/UNU: Technical Report Series, 724 (1985) Energy and Protein Requirements, Geneva.
- WHO Technical Reports Series for different Nutrients.
- Joshi S. (2011): Nutrition and Dietetics, 3rd edition, Tata McGraw Hill Education Pvt. Ltd.
- Manay N., Shadaksharaswamy M. (2008), Foods, Facts and Principles, 3rd Edition, New Age International (P) Ltd. Publication
- Khanna K., Gupta S, Passi SJ, Seth R, Mahna R and Renu S (1997). Textbook of Nutrition and Dietetics, Elite Publishing House, New Delhi.
- Jim M, Stewart Truswell A. (2007). Essentials of human nutrition. New York; Oxford.
- Mahtab S Bamji. (2010). Textbook of human nutrition. Delhi : Oxford.
- Stipanick, Martha H., (2006). Biochemical Physiological Molecular aspect of human nutrition. London : Elsevier.
- Babasahib and Desai. (2000). Handbook of nutrition and diet. New York.

**B.Sc. (Home Science) 3<sup>rd</sup> Semester**

**APPLIED NUTRITION - I  
(PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

1. Categorization of foods based on rich, moderate and poor sources of :
  - Energy
  - Proteins
  - Vitamin A
  - Vitamin B complex
  - Vitamin C
  - Iron
  - Iodine
  - Calcium
  - Fibre
  
2. Planning and preparation of dishes rich in:
  - Energy
  - Protein
  - Fibre
  - Calcium
  - Iron
  - Vitamin A
  - Vitamin C
  - Thiamine
  - Riboflavin
  - Niacin

**B.Sc. (Home Science) 3<sup>rd</sup> Semester**  
**Development in Infancy**  
**(Theory)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Instructions to paper setters:**

1. Each theory paper will be of **three hours** duration.
2. Question paper will have **four** sections.
3. A total of **nine** questions comprising of two questions from each unit, and **one compulsory** question of short answer type covering the whole syllabus will be set.
4. All questions may carry **equal marks** unless specified.
5. Students will be expected to attempt one question from each unit and the compulsory question.

**Objectives:**

1. To develop awareness of important aspects of development during infancy.
2. To understand the influence and interaction of socio-cultural and environmental factors on development during infancy

**Content:**

**Unit I**

1. Cognitive development in Infancy- Sensory motor stage of Piaget.
2. Factors affecting cognitive development in infancy.

**Unit II**

3. Language development in Infancy – Pre speech forms of communication.
4. Factors affecting language development.

### Unit III

5. Care of Infant in the family – Role of mother, father, siblings and grandparents.
6. Physical care of the infant - Feedings, Clothing and Sleeping.

### Unit IV

7. Common emotional pattern in infancy
8. Common Play patterns of infancy.

#### **References:**

- Berk, L. E. (1996): Child Development, New Delhi: Prentice Hall.
- Bee, Helen (1995). The developing child, Harper Collins Publishers.
- Craig,G (1999):Human Development. NJ: Prentice Hall.
- Cole,M.&Cole,S.(1995):The Development of Children. NY: Freeman & Co.
- Dacey, J.S. & Travers, J.F. (2002). Human Development across the life span, McGraw Hill, New York.
- Gardiner, H.W., Mutter, J.D. & Kosmitzki initial (1998): Lives across Cultures, Boston: Allyn & Bacon.
- Papalia, Diane E. (1978). Human Development, N.Y.: McGraw Hills Book Company.
- Rice,F.P.(1965):Human Development: A life Span Perspective, NY: McGraw Hill.
- Santrock,J.W.(1997):Life Span Development.Tata McGraw Hill, New Delhi.
- Santrock, J.W. (2007): Life Span Development. Tata McGraw Hill, New Delhi.

**B.Sc. (Home Science) 3<sup>rd</sup> Semester**

**Development in Infancy**

**(Practical)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

**Instructions for Paper Setter:**

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.

**Contents:**

1. Conduct a market survey related to items available for infants namely feeding, clothing and sleeping.
2. Prepare a folder related to common play activities parents indulge in with infants and lullabies they sing.
3. Make a toy to enhance any development of an infant and exhibit it in class.
4. Make a poster on any development of an infant and display it in the department.

**References:**

- Berk, L. E. (1996): Child Development, New Delhi: Prentice Hall.
- Bee, Helen (1995). The developing child, Harper Collins Publishers.
- Craig, G (1999):Human Development. NJ: Prentice Hall.
- Cole, M.& Cole, S.(1995):The Development of Children. NY: Freeman & Co.

## **B.Sc. (Home Science) Third Semester**

### **Interior Furnishings**

#### **(THEORY)**

**Maximum Marks: 50**

**Paper - 45**

**Internal Assessment - 05**

**Credit Hours: 2/week**

**Duration of Exam: 3hours**

#### **Instructions to the Examiner**

Question paper will have four sections. Examiner will set a total of nine questions comprising of two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Student will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

#### **Objectives**

1. To understand the fundamentals of interior furnishings
2. To understand the different types of interior furnishings and decorations
3. To imbibe the information and guidance for decorating interiors with special reference to latest trends in the market
4. To develop practical skills required to become professional interior decorators

#### **UNIT -I**

1. Home furnishing – Meaning and importance, types of home furnishings
2. Floor Coverings-
  - Selection of floor coverings
  - Hard floor coverings- Tiles, Wood, linoleum, stone
  - Soft floor coverings – Rugs and Carpets – Types

#### **UNIT-II**

3. Selection of wall treatment, Types of wall treatments – paints, varnishes, wall papers, fabric, wood panels, tiles, mirror, cork
4. Accessories – selection of accessories, kinds of accessories

#### **UNIT-III**

5. Window treatment- Meaning, Importance and selection criteria

6. kinds of window treatment –
  - Hard window treatments- Blind, shutters, shades, screens
  - Soft window treatments- Curtains & Draperies
7. Top treatment to windows- Cornice, Valance, Swag, Jabot, Cascade

#### **UNIT-IV**

8. Selection criteria for furniture.
9. Material used for furniture - Wood(Hard & Soft), Plastic, Metal, Glass & Cane.

#### **References**

1. Rao. M. P. 2012 Interior Design - Principles and Practice, Standard Publisher Distributor, Delhi.
2. Seetharaman P. and Pannu P. 2012. Interior Design and Decoration. CBS Publishers and Distributors, New Delhi
3. The Educational Planning group Delhi. Home Managment 1987. Arya Publishing House, New Delhi
4. Varghese A.M; Ogale N.N and Srinivasan K. 2006. Home Managment. New Age International Pvt. Ltd Publishers, New Delhi.
5. Anna. H. Rutt ;Home Furnishing, John Wilay Eastern Pvt. Ltd. New York (1961)
6. Veena Gandotra; Meenakshi Shukala and Neerja Jaiswal. Introduction to Interior design & Decoration , Dominat publishers & Distributers

**B.Sc. (Home Science) Third Semester**

**Interior Furnishings**

**(Practical)**

**Maximum Marks: 25**

**Paper – 20**

**Internal Assessment - 5**

**Credit Hours: 2 /week**

**Duration of Exam: 3 hours**

1. Flower Arrangement
  - Flower arrangements types – Fresh flower, foliage , dry arrangement, Ikebana
  - Basic tools and equipment use in flower arrangements, selection of containers and accessories
  - Elements and principles used for making flower arrangements
  - General tips for making flower arrangement
2. Developing room plans showing furniture arrangement, furnishings and colour scheme for different areas of the house- Drawing, Dining and bed rooms.
3. Creating a household accessory ( lamp shade / table linen/ bed linen/ Cushion covers/ sculpture / Vases / Candle stand / Mirrors / Screens / Wall hanging etc.)
4. Developing display on topics relating to home interiors.
5. Design and draw different kinds of windows treatments for interiors and treating problem windows/challenging window.
6. Portfolio comprising of different furnishing materials (curtains, draperies, upholstery, cushions, table linen, bedroom linen) available in the market and its cost.



**B.Sc. (Home Science) 3<sup>rd</sup> Semester**  
**FABRIC CONSTRUCTION (THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Objectives:**

1. To impart knowledge of fabric manufacture and fabric properties.
2. To enable students to understand fabric structures and to analyze them

**Instruction for paper setters:**

1. There will be total nine questions carrying equal marks.
2. Two questions will be set from each unit and one compulsory question carrying short answer type questions will be set from the whole syllabus.
3. Five questions will be attempted in all.

**UNIT-I**

- I. Terminology- Yarn count, twist, crimp, fabric balance, fabric weight, selvedge, grain, warp, weft, course, wale, single jersey, double knit.
- II. Introduction to Yarns
  - a) Different types of spinning: Mechanical, Chemical (Dry, Wet, and Melt)
  - b) Classification of Yarn: Simple, Novelty and Textured Yarns

**UNIT-II**

- III. Introduction to Loom
  - a) Basic Loom and its parts
  - b) Different types of loom: Shuttle loom and Shuttle less loom.

**UNIT-III**

- IV. Introduction to Weaving
  - a) Classification of weaves
  - b) Basic Weave: Plain, Twill and Satin
  - c) Fancy Weave: Pile, Dobby, Leno, Swivel, Lappet

**UNIT-IV**

- V. Basic fabric construction techniques:
  - a) Knitting
  - b) Bonding
  - c) Felting
  - d) Knotting

**Recommended Readings:**

1. "A Reader's Digest Step by Step guide- Sewing and Knitting", Reader's Digest (Australia) Pty Ltd.
2. Barker A. F. & Midgley E. "Analysis Woven Fabrics" Abhishek Publications, Chd, India(2007)
3. Dantyagi.S, "Fundamentals of Textiles and their Care," Orient Longman Ltd, New Delhi.
4. Corbman, "Textile fiber to Fabric"; MC Graw Hill
5. Murphy W.S. " Textile Weaving & Design" Abhishek Publications, Chandigarh, India(2007)
6. Collins & Brown " Complete Knitting- Techniques and Project" Creative Homeowner, NJ(2006)
7. Walters J. & Cosh S. " Crochet" Octopus Book Ltd., London(1980)
8. Tortora, p, "Understanding Textiles", Macmillan Publishing Co. Inc. New York, (1978).
9. Kathryn and Mc-Kelvey, "Fashion source book", 4<sup>th</sup> edition, New Delhi, Om(2005)

**B.Sc. (Home Science) 3<sup>rd</sup> Semester**  
**FABRIC CONSTRUCTION**  
**(PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

**Objectives:**

To enable the students to-

1. Identify yarns and weaves.
2. Make samples of knitting and crocheting.

**Instructions to paper setter:**

1. There will be three questions in all.
2. Project work should not be included in question paper.

1. Identification of Yarns.
2. Identification of Weaves.
3. Graphical representation of simple weaves
  - a) Plain Weave
  - b) Twill Weave
  - c) Satin Weave
4. Construction of samples of the following
  - i) Hand Knitting
    - a) Stocking stitch
    - b) Garter
    - c) Rib
    - d) Moss
    - e) Cables
    - f) Lace
    - g) Fair-isle
5. Crocheting
  - a) Single crochet
  - b) Double crochet

**Project Work:** Make an article using any one of the fabric construction technique.

**Recommended Readings:**

1. "A Reader's Digest Step by Step guide- Sewing and Knitting", Reader's Digest (Australia) Pty Ltd.
2. Barker A. F. & Midgley E. "Analysis Woven Fabrics" Abhishek Publications, Chd, India(2007)
3. Dantyagi.S, "Fundamentals of Textiles and their Care," Orient Longman Ltd, New Delhi.
4. Corbman, "Textile fiber to Fabric"; MC Graw Hill
5. Murphy W.S. " Textile Weaving & Design" Abhishek Publications, Chandigarh, India(2007)
6. Collins & Brown " Complete Knitting- Techniques and Project" Creative Homeowner, NJ(2006)
7. Walters J. & Cosh S. " Crochet" Octopus Book Ltd., London(1980)
8. Tortora, p, "Understanding Textiles", Macmillan Publishing Co. Inc. New York, (1978).
9. Kathryn and Mc-Kelvey, "Fashion source book", 4<sup>th</sup> edition, New Delhi, Om(2005)

**B.sc. (Home Science) 3<sup>rd</sup> Semester**  
**APPLIED PHYSICS-I**  
**(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Instructions to Examiner**

1. Total nine questions to be set. Two questions from each unit and one compulsory question covering the whole syllabus may be set in the form of objective type/ fill in the blanks/short questions/ short notes etc.
2. Total five questions to be attempted (one from each section and one compulsory question).
3. Each question carries 9 marks.
4. Internal choice can also be given.

**Objective:**

To provide knowledge regarding the applications of physics in day to day life.

**CONTENTS**

**Unit-I**

1. Matter, States of Matter – Solid, Liquid, Gas, Plasma (Definition and Characteristics).
2. Atoms. Elements, Molecules. Intermolecular forces, Types of intermolecular forces – Force of Adhesion & Force of Cohesion.
3. Molecular range, Sphere of Influence, Surface film and Surface tension (Definition only). Detailed Account of Molecular theory of Surface Tension.
4. Short note on Detergents and Surface Tension.
5. Common illustrations/ applications of surface tension.

**Unit-II**

6. Brief account of Capillary, Capillarity and Angle of contact.
7. Practical applications of Capillarity in everyday life.
8. Heat, General idea about Modes of Transfer Of Heat- Conduction, Convection, Radiation
9. Applications / Illustrations of transfer of heat in day to day life. Short note on Solar cooker

### . Unit-III

10. Define – Periodic motion, Oscillatory motion, Vibration, Oscillation, Time period, Frequency, Amplitude, Wave motion and Wave length.
11. Types of Waves-Mechanical, Electromagnetic and Matter Waves (Definitions)  
Brief idea about types of Mechanical wave motion-Transverse and Longitudinal wave motion, Essential conditions for transverse and longitudinal waves to travel through a medium, Difference between transverse and longitudinal wave motion, Definitions of Crest, Trough, Compression. Rarefaction.
12. Characteristics of wave motion, Velocity-Frequency(  $v$ - $n$ ) relationship.
13. Simple numericals with direct substitution. ( $v$ - $n$ - $T$ ).

### Unit-IV

14. Simple idea about Superposition of waves, Superposition Principle and Stationary Waves.
15. Production of Transverse stationary waves in a stretched string, Laws of Transverse vibrations of a stretched string.
16. Define Free, forced & resonant vibrations with examples .
17. Short notes on Human voice organ, Sound Insulation, Hearing aids, Acoustics of Buildings.

**B.Sc. (Home Science) 3<sup>rd</sup> Semester**  
**APPLIED PHYSICS -I**  
**(PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

**Instructions to Examiner**

- Two practicals to be performed. One compulsory and one of student's choice (from different categories).
- Both the practicals carry equal marks.
- Separate marks for practical file and viva- voce.

**Contents:**

- 1) Measurement of diameter of a small spherical body using Vernier Callipers.
- 2) Measurement of room temperature and high temperatures of a liquid in °C and to convert the temperature to °F.
- 3) Measurement of temperature of human body in °F and to convert the temperature to °C.
- 4) To verify the first law of transverse vibrations in a stretched string using sonometer.
- 5) To verify the second law of transverse vibrations in a stretched string using sonometer.
- 6) To find velocity of sound at 0°C using first resonance position and by applying end correction.
- 7) To find velocity of sound at 0°C using two resonance positions.

**Books recommended (for Theory and Practical)**

**B.Sc. (Home Science)3<sup>rd</sup> Semester**  
**APPLIED CHEMISTRY -I**  
**(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Instructions to Examiners**

- Total nine questions to be set out of which five to be attempted (two questions from each unit)
- One compulsory question covering the whole syllabus may be set in the form of objective/ fill in the blanks/ short notes etc.
- Each question carries 9marks.
- Internal choice can also be given.

**Objective:**

To make the students aware of the basics and applications of chemistry in every day life.

**Unit-I**

**Essentials of Chemistry**

1. Symbols formulae, valency and variable valency, elementary idea of empirical formula and molecular formula (no numerical) definition of atomic weight and molecular weight, Mole Concept.
2. Chemical equation and reaction: Parts, types, essential of chemical equation, balancing of chemical equation by hit and trial method, drawbacks of chemical equations and their removal, Exothermic and endothermic, catalytic and reversible reactions.

**Unit-II**

1. Chemical Bonding: Definition of chemical bond, cause of chemical bonding, types of chemical bonds- ionic bond, covalent bond, coordinate bond (def & simple picture based on electron-dot picture) eg:  $O_2$ ,  $HCl$ ,  $Cl_2$ ,  $CaO$ ,  $NH_4^+$ ,  $H_3O^+$ ,  $MgF_2$ ,  $CH_4$ ,  $C_2H_4$ ,  $C_2H_2$ ,  $H_2O$ ,  $H_2$ ,  $NH_3$
2. Elementary idea about normality, formality, molarity, strength of solution, mole fraction and ppm, What are solutions.



### Unit-III

1. Elementary idea about hard water (causes and types), heavy water with its uses.
2. Soaps & detergents. Their Cleansing action.
3. Fire extinguishers – Types & Uses.

### Unit-IV

1. Properties and uses of Methane ( $\text{CH}_4$ )
2. Properties and uses of ethylene ( $\text{C}_2\text{H}_4$ )
3. Properties and uses of Acetylene ( $\text{C}_2\text{H}_2$ )

#### **Suggested books:**

1. Applied Chemistry for Home science and Allied science by Thanamma Jacob
2. NCERT books of +1 and +2.
3. Engineering books by Jain and Jain.
4. Modern approach to Chemistry Volume -1
5. Modern approach to Chemistry Volume -2

**B.Sc. (Home Science)3<sup>rd</sup> Semester**  
**APPLIED CHEMISTRY -I**  
**(PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks :25**  
**Paper :20**  
**Internal Assessment :05**

1. Preparation of vanishing cream and cold cream.
2. Preparation of washing powder and liquid soap.
3. Preparation of antiseptic ointment (Sulphur, General and Boric)
4. To determine the normality and strength of given alkali solution.
5. To determine percentage purity of given sample of alkali solution.
6. To determine percentage composition of given sample of alkali mixture.

**B.Sc. (Home Science) 3rd Semester**  
**PHYSIOLOGY AND PROMOTIVE HEALTH - I**  
**(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Objectives:**

1. To gain knowledge about health, hygiene, common diseases.
2. To study about environmental pollutants (air and water).
3. To understand basic functioning of various systems of human body.

**Instruction to the paper setter:**

5. Each theory paper will be of three hours duration.
6. Questions paper will have four section and units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
7. Students will attempt one question from each unit and the compulsory question (Total of five questions).
8. All questions may carry equal marks, unless specified.

**UNIT- I**

1. Blood:
  - Composition of blood: Hemoglobin, plasma, platelets, leucocytes and erythrocytes.
  - Erythropoiesis.
2. Cardiovascular System:
  - Basic structure of heart, cardiac output
  - Blood pressure and its measurement.
  - Brief overview of cardiac cycle

## UNIT- II

3. Respiratory System:
  - Structure of respiratory system
  - Mechanism of breathing: inspiration and expiration
  - Lung volume and capacities
4. Digestive system:
  - Structure
  - Functions and digestion of food in the mouth, stomach, intestines and importance of salivary glands, stomach, pancreas and liver.

## UNIT- III

5. Personal Hygiene:
  - Need for personal hygiene and personal hygienic habits
  - Personal sanitary practices
  - Considerations for correct clothing
  - Importance of rest, exercise and recreation.
6. Hygiene in Kitchen and Home:
  - Lighting and ventilation

## UNIT- IV

7. Concept of health, disease and its prevention.
  - WHO definition of health
  - Basic concept of disease
  - Types of parasites and their modes of transmission
8. Concept of public health and disease prevention.
  - Sanitation in fairs and festivals with basic methods of epidemic control in fairs and festivals.
  - Waste management: Disposal of refuse and sewage.
  - Public Toilets/Mobile public toilets

## **RECOMMENDED READINGS:**

Sunetra Roday. Food Hygiene and Sanitation with case studies. 2<sup>nd</sup> Edition. Mc Graw Hill. 2011 Evelyn Pearce. Anatomy and Physiology for Nurses, Jaypee brothers, New Delhi 1987

Chaterjee. Human Physiology, Calcutta Medical Agency. 1988.

Guyton Arthm . C. Text Book of Medical Physiology, London W.B. Saunders Co. 1999

Yash Pal Bedi. Hygiene and Public health. Atma ram and sons. 10<sup>th</sup> Edition. 1970

J.E.Park-Preventive and Social Medicine. Banarsidas Bhanot Publishers, Jabalpur(India), 15<sup>th</sup> Edition

Ganong WF. Review of Medical Physiology, 22<sup>nd</sup> ed. McGraw Hill. 2005

Ross and Wilson, Foundation of Anatomy and Physiology, 6<sup>th</sup> ed. Medical Division of Longman Group Ltd. 1987.

Jain, AK. Textbook of Physiology (5<sup>th</sup> ed). Avichal Publishing Company. Vol I and Vol II. 2012

**B.Sc. (Home Science) 3rd Semester**  
**PHYSICAL EDUCATION**  
**(Practical)**

**Credit Hours: 2 /week**  
**Duration of Exam: 3 hours**

**Grade: S/US**

**Instruction to the Examiner:**

The examiner shall consider annual assignment of the student, physical education practical file, take practical exam & viva voce based on syllabus for grading the students performance in the examination.

**Objectives:**

1. Wholesome development of an individual.
2. Knowledge of basic techniques involved in athletic events.
3. Practical knowledge of techniques and skills involved in various games out of syllabus.
4. Knowledge and benefit of yoga in day to day life.

UNIT-I

(a) Physical Education: Definition, its aims and objectives and Importance of Physical Education Programmes in College Athletics: Brief knowledge of track and field events. Marking of Athletic Track

UNIT- II

Field Event: Jump- Long Jump

- [a] Dimensions
- [b] Techniques
- [c] Fouls

UNIT- III

Anyone game from the following games:

- [a] Badminton
- [b] Kho- Kho
- [c] Volleyball
- [d] Yoga

UNIT - IV

- [a] Brief knowledge of Common Wealth Games and current national records in Athletics
- [b] Knowledge of prominent players of the games in syllabus

**REFERENCES:**

1. A Text Book of Physical Education and Sports by Atwal and Kansal.
2. Rule Book of Athletics by Amateur Athletic Federation of India.
3. Rule Book of Badminton by Badminton Federation of India.
4. Rules Book of Kho-Kho by Kho-Kho Federation of India.
5. Rule Book of Volley Ball by Volley Ball Federation of India.
6. Various search engines found on internet.

**B.Sc. (Home Science) 3rd Semester**

**MUSIC (Vocal)  
(Practical)**

**Credit Hours: 2 /week**

**Grade: S/US**

**Duration of Exam: 3 hours**

**Instructions to paper setters:**

*The examiner shall consider music practical file practical based on syllabus and viva-voce for the grading the students performance..*

**Objectives:**

- Introduction of Swara,raga,Taal, alankars
- To develop interest in classical music.

**UNIT- I**

Two fast khayals with Alap and Taans of the following Ragas

- A) Bhimpalasi
- B) Bhairav.

**UNIT- II**

One Lakshan geet in raag of prescribed syllabus.

**UNIT- III**

The following taals with Ekgun and Dugun with Bols on hand

- A) Ektaal
- B) Jhaptal

**UNIT- IV**

Life sketeches of musicians

- A) Pandit Shiv Kumar Sharma
- B) M.S. Subalakshmi

**Recommended Readings:**

1. Harish Chander Shrivastava (1993): Rag Prichaya Part – II, Sangeet Sadan Parkashan, 88, South Malaka, Allahabad.
2. Harish Chander Shrivastava (1993) : Rag Prichaya Part – III, Sangeet Sadan Parkashan, 134, South Malaka, Allahabad.
3. Pandit Vishnu Narayan Bharkande (1989): Hindustani Sangeet Padhhti Part II Sangeet Karyalaya, Hathras (UP).
4. Pandit Vishnu Narayan Bharkande (1988): Hindustani Sangeet Padhhti Part III Sangeet Karyalaya, Hathras (UP).
5. Lakshmi Narayan Garg: Hindustani Sangeet Padhhti Part III Sangeet Karyalaya, Hathras (UP).
6. Shri Prabhu Lal Garg Basant: Sangeet Karyalaya, Hathras (UP)
7. Search engines on internet.



**B.Sc. (Home Science) 3rd semester  
DANCE  
(Practical)**

**Credit Hours: 2 /week**  
**Duration of Exam: 3 hours**

**Grade: S/US**

**Instructions to paper setters:**

*The examiner shall consider dance practical file, practical based on syllabus and viva-voce for the grading the students performance..*

**Objectives:**

- Whole some development of individual.
- Introduction to laya and Taal.

**UNIT- I**

**Teen Taal**

- A. Tora 4
- B. Salami 1
- C. Amad 1

**UNIT- II**

**Chautal**

- A. Tatkar in Single and Dugun Laykaries
- B. Tora 1
- C. Amad 1

**UNIT- III**

**1Gatnikas in Tentaal**

**UNIT- IV**

Practical demonstration of 10 Asamyukta Hasta Mudra.

**Recommended Readings**

1. Kathak Nritya Shiksha part-I by Dr. Puru Dadhich.
2. Kathak Nritya Shiksha Part-II, by Dr.Puru Dadhich

**B.Sc. Home Science – 4<sup>th</sup> Semester**

Sr. No.	Paper/ Subject	Credit Hours			Theory Marks			Practical Marks			Total
		T	P	Total	Paper	Int. Ass.	Total	Paper	Int. Ass.	Total	
1	Art in Everyday life	2	2	4	45	5	50	20	05	25	75
2	Applied Nutrition - II	2	2	4	45	5	50	20	05	25	75
3	Development in early childhood	2	2	4	45	5	50	20	05	25	75
4	Fundamentals of Housing	2	2	4	45	5	50	20	05	25	75
5	Apparel Construction	2	2	4	45	5	50	20	05	25	75
6	Applied Physics -II	2	2	4	45	5	50	20	05	25	75
7	Applied Chemistry -II	2	2	4	45	5	50	20	05	25	75
8	Physiology & Promotive health -II	2	-	2	45	5	50	-	-	-	50
9	Physical Education, Music & Dance	-	2	2	-	-	-	Satisfactory/ Unsatisfactory S/US			-
	<b>TOTAL</b>			<b>32</b>							<b>575</b>

**B.Sc. (Home Science) 4<sup>th</sup> Semester**

**ART IN EVERYDAY LIFE  
(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Instruction to the examiner:**

1. Question paper will have four sections.
2. Examiner will set a total of nine questions comprising of two questions from each unit and one compulsory question of short answer type covering the whole syllabus.
3. Students will attempt one question from each unit and the compulsory question.
4. All questions may carry equal marks unless specified.

**OBJECTIVES:-**

**To enables students-**

- a) To gain better understanding of the application of Art Principles in interiors.
- b) To understand the elements of Art and Design as applied to daily life.
- c) To gather information regarding technologies and materials used for interiors.

**UNIT-I**

- a) Shadangas of Indian ART (six-limbs).
- b) History of Aesthetics
- c) Scope of Aesthetics

**UNIT- II**

Relation of art with other subjects-

- a) Art and Beauty
- b) Art and Intuition
- c) Art and Religion
- d) Art and Nature

**UNIT- III**

- a) Appreciation of Art
- b) How to understand and enjoy the visual arts.

**UNIT- IV**

- a) How to create art objects for Homes.
- b) The selection of art accessories for interior decoration.

**B.Sc. (Home Science)4<sup>th</sup> Semester**

**ART IN EVERYDAY LIFE  
(PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

**Instruction to the examiner:**

- The examiner will set a total of three questions from the syllabus. Students will attempt any one question from the three questions set.

**OBJECTIVES:-**

**To enables students-**

- a) To gain better understanding of the application of Art Principles in interiors
  - b) To understand the elements of Art and Design as applied to daily life
  - c) To gather information and understand and enjoy visual arts.
1. Creating compositions on various social and economic topics.
  2. Creating posters on various social and economic topics
  3. Block lettering, Roman and free hand brush letter writing.
  4. Writing slogans on various topics.
  5. To design book cover with illustrations, title and author's name etc.-Medium- pen and ink, poster colors, Size- 25 cm x 20 cm.
  6. Designs for corner, border and the central patterns etc.
  7. Creating murals, wall hangings and toys (stuffed and waste material) etc.
  8. Creating a theme project which includes any seven objects for a room. (Bedsheets, Curtains, table covers, carpet and flowerpot etc. )

**REFERENCES**

1. Art in Everyday Life- Harriet Goldstein Mac Millan Co. New York.
2. Rendering with Pen & Ink- Robert W. Gill (Thames and Hudson Manual).
3. Colour Trends- Vol. I, Ethnic, Japanesque, High- Tech Colours, AIM Creative Products Pvt. Ltd.
4. Colour –A Guide to basic facts and concepts, John Wiley & Sons, New York.
5. A brief history of Indian Painting- Dr. L.C. Sharma, Publishing House Meerut.
6. A Hand Book of Indian Art, Sunil Khosa, Sundeep Prakashan Delhi.

7. Elements of Indian Art, S.P. Gupta, Shashi Prabha Asthana, D.K. Print World, New Delhi.
8. Ajanta Murals – A Ghosh, Archeological Survey of India- New Delhi.
9. Art and Illusion- E.H. Gombrich, PHAIDON Press London.
10. Sedona – Rosenstiel’s Publishers, 2005, Fine Art Publishers, London.
11. Silver- Rosenstil’s Publishers, 2005, Fine Art Publishers, London.

**B.Sc. (Home Science) 4th Semester**  
**APPLIED NUTRITION - II**  
**(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Objectives:**

1. To elucidate the applied concepts of different areas of foods and nutrition.
2. Acquire knowledge about the nutritional needs and concerns of specific age groups/physiological conditions.

**Instruction to the paper setter:**

1. Each theory paper will be of three hours duration.
2. Questions paper will have four section and units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Students will attempt one question from each unit and the compulsory question (Total of five questions).
4. All questions may carry equal marks, unless specified.

**UNIT – I**

1. Concept and components of body composition.
2. Water- functions, requirements and deficiency.
3. General methods of assessment of recommended dietary allowances.

**UNIT – II**

4. Concept of energy balance:
  - Positive, Negative. Homeostasis
  - Physiological fuel value(carbohydrates, protein, fat)
5. Concept of BMR, SDA/TEF:
  - Factors affecting BMR and energy expenditure

**UNIT-III**

6. Physiological characteristics, nutritional requirements and nutritional care in the following:
  - Infancy
  - Childhood

7. Physiological characteristics, nutritional requirements and nutritional care in the following:
  - Adolescence
  - Adulthood

#### UNIT- IV

8. Physiological characteristics, nutritional requirements and nutritional care in the following:
  - Pregnancy and lactation
  - Old Age
9. Diet Therapy:
  - Principles of diet therapy
  - Modification of normal diet
  - Nutritive modifications of diet.
  - Basic concept of enteral and parenteral nutrition

#### RECOMMENDED READINGS:

- Guthrie, A. H. (1986): Introductory Nutrition, 6th Ed., The C.V Mosby Company.
- Swaminathan, M (1991): Essentials of Food and Nutrition, vols. I and II. Ganesh and Co. Madras.
- Gopalan, C. et al., (1991): Nutritive Value of Indian Foods, Indian Council of Medical Research.
- Indian Council of Medical Research (1989): Nutrient Requirements and Recommended Dietary Allowances for Indian, New Delhi.
- FAO/WHO/UNU: Technical Report Series, 724 (1985) Energy and Protein Requirements, Geneva.
- WHO Technical Reports Series for different Nutrients.
- Joshi S. (2011): Nutrition and Dietetics, 3rd edition, Tata McGraw Hill Education Pvt. Ltd.
- Manay N., Shadaksharaswamy M. (2008), Foods, Facts and Principles, 3rd Edition, New Age International (P) Ltd. Publication
- Khanna K., Gupta S, Passi SJ, Seth R, Mahna R and Renu S (1997). Textbook of Nutrition and Dietetics, Elite Publishing House, New Delhi.
- Jim M, Stewart Truswell A. (2007). Essentials of human nutrition. New York; Oxford.
- Mahtab S Banji. (2010). Textbook of human nutrition. Delhi : Oxford.
- Stipanick, Martha H., (2006). Biochemical Physiological Molecular aspect of human nutrition. London : Elsevier.
- Babasahib and Desai. (2000). Handbook of nutrition and diet. New York.

**B.Sc. (Home Science) 4th Semester**

**APPLIED NUTRITION - II  
(PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

1. Planning and preparation of following diets:
  - Weaning Foods
  - School going Child
  - Adolescents
  - Adult man and women
  - Pregnancy and lactations
  - Old Age
  
2. Therapeutic modification of diet on the basis of:
  - Consistency
  - Nutrient
  
3. Market survey and report presentation of therapeutic diets/foods/formulas available for:
  - Protein
  - Energy
  - Micronutrients- sodium, potassium, calcium, iron
  - Fibre



**B.Sc. (Home Science) 4<sup>th</sup> Semester**  
**Development in Early Childhood**  
**(Theory)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Instructions to paper setters:**

1. Each theory paper will be of **three hours** duration.
2. Question paper will have **four** sections.
3. A total of **nine** questions comprising of two questions from each unit, and **one compulsory**
4. Question of short answer type covering the whole syllabus will be set.
5. All questions may carry **equal marks** unless specified.
6. Students will be expected to attempt one question from each unit and the compulsory question.

**Objectives:**

1. To develop awareness of important aspects of development during early childhood.
2. To understand the influence and interaction of socio-cultural and environmental factors on development during early childhood.

**Content:**

**Unit I**

1. Physical development during early childhood
2. Motor skills in early childhood.

**Unit II**

3. Cognitive development in early childhood – Piaget’s Preoperational stage of cognitive development.
4. Factors affecting cognitive development in early childhood.

### Unit III

5. Language Development in early childhood years.
6. Factors influencing language of young children.

### Unit IV

7. Play – importance and types.
8. Common emotions of early childhood.

#### **References:**

- Berk, L. E. (1996): Child Development, New Delhi: Prentice Hall.
- Bee, Helen (1995). The developing child, Harper Collins Publishers.
- Craig,G (1999):Human Development. NJ: Prentice Hall.
- Cole,M.&Cole,S.(1995):The Development of Children. NY: Freeman & Co.
- Dacey, J.S. & Travers, J.F. (2002). Human Development across the life span, McGraw Hill, New York.
- Gardiner, H.W., Mutter, J .D. &Kosmitzki initial (1998): Lives across Cultures, Boston: Allyn & Bacon.
- Papalia, Diane E. (1978). Human Development, N.Y.: McGraw Hills Book Company.
- Rice,F.P.(1965):Human Development: A life Span Perspective, NY: McGraw Hill.
- Santrock,J.W.(1997):Life Span Development.Tata McGraw Hill, New Delhi.
- Santrock, J.W. (2007): Life Span Development. Tata McGraw Hill, New Delhi.

**B.Sc. (Home Science) 4<sup>th</sup> Semester**  
**Development in Ealy Childhood**  
**(Practical )**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

**Instructions for Paper Setter:**

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.

**Contents:**

1. Observe three girls and three boys in play situation and record the
  - Nature of play.
  - Difference in the choice of toys of girls and b/oys.
  - Common problems they have while playing.
2. Prepare a folder of activities you can do with a 4 years old to enhance his
  - Language development
  - Physical development
  - Cognitive development
3. Interview the mothers regarding their concerns related to parenting of young children.
4. Prepare a display for bulletin board related to any development of early childhood -  
Physical, Motor, Cognitive.

**References:**

- Berk, L. E. (1996): Child Development, New Delhi: Prentice Hall.
- Bee, Helen (1995). The developing child, Harper Collins Publishers.
- Craig, G (1999):Human Development. NJ: Prentice Hall.
- Cole, M. & Cole, S.(1995):The Development of Children. NY: Freeman & Co.

**B.Sc. (Home Science) Fourth Semester**  
**Fundamentals of Housing**  
**(THEORY)**

**Maximum Marks: 50**  
**Paper - 45**  
**Internal Assessment - 05**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Instructions to the Examiner**

Question paper will have four sections. Examiner will set a total of nine questions comprising of two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Student will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

**Objectives**

1. To impart essential information for making a good house.
2. To give a comprehensive module in how best to plan and build home.
3. To develop practical skills in planning different rooms.

**UNIT -I**

1. Importance /needs of house-physiological needs, affectional needs, socio-economic needs, psychological needs
2. Site selection
  - Soil- Types of soil for housing
  - Location- Relationship with the road, the orientation, Effect of winds, the surrounding environment.
  - Characteristics of the plot - size, proportion, shape, types of houses , Urban byelaws

**UNIT-II**

3. General principles of Housing- aspect, prospect, grouping, roominess, flexibility, lighting, ventilation and sanitation.
4. Classification of house – Flats; studio apartment; condominium; villas; pent house

5. Economy in construction

### **UNIT-III**

6. Need of planning homes, Open & closed plans, Planning aspects of Living Room, Drawing & Dining Room, Bedrooms.
7. Kitchen planning- its need, Type of kitchen plans, Work triangle, Standard measurement.

### **UNIT-IV**

8. Landscape- Importance, Planning – Hard & Soft landscape, Design Process.
9. Dealing with external agencies- legal aspect & procedures involved in buying a land & construction of house.

### **References**

1. Debjani Raychaudhuri Dutt Plan & Build Your Home , Pustak mahal , New delhi, Edition;2010
2. R.S. Deshpande Modern Ideal Homes for India , Poona United Book Corporation
3. R.S. Deshpande Build Your own Home, Poona United Book Corporation
4. Home Management by The educational Planning Group Delhi, Arya Publishing House
5. M. Pratap Rao landscape Design Standard publishers Distributors, Delhi

**B.Sc. (Home Science) Fourth Semester**  
**Fundamentals of Housing**  
**(Practical)**

**Maximum Marks: 25**

**Paper – 20**

**Internal Assessment - 5**

**Credit Hours: 2 /week**

**Duration of Exam: 3hours**

1. Estimating the cost of construction
2. Kitchen plans- one walled, the corridor, U-shaped, L- shaped, Peninsular.
3. Landscape design in a given area.
4. Make and collect pictures of landscape accessories.
5. Display board setting for different types of kitchens/ materials/ accessories.
6. Making a portfolio based on survey related to different housing finance agencies & making comparative chart for housing loans given by various companies/ Banks.

**B.Sc. (Home Science) 4<sup>th</sup> Semester**  
**APPAREL CONSTRUCTION**  
**(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Objectives:**

To impart knowledge about-

1. Handling of special fabrics.
2. Garment details and suitability of different fabrics for different garments.

**Instructions for paper setters:**

*There will be total nine questions carrying equal marks. Two questions will be set from each unit and one compulsory question carrying short answer type questions will be set from the whole syllabus. Five questions will be attempted in all.*

**UNIT-I**

1. Suitability of different natural fabrics for different garments:
  - a) Cotton
  - b) Linen
  - c) Wool
  - d) Silk
2. Suitability of different man-made fabrics for different garments:

**UNIT-II**

3. Preparation of fabric before cutting
4. Different types of layout.
5. Handling of Special Fabrics and Knowledge of size of needles, threads and stitches according to the fabric.
  - a) Crepe, Chiffon, Satin
  - b) Knitted fabrics
  - c) Net
  - d) Beaded and Sequined fabric
  - e) Fur, Corduroy, Velvet

### UNIT-III

6. Garment details – Terminology , various types and suitability of the following to different garments:-
  - a) Collars
  - b) Sleeves
  - c) Pockets
  - d) Plackets

### UNIT-IV

7. Garment Style:-
  - a) Skirts
  - b) Trousers
  - c) Jackets and Coats
  - d) One piece dresses

#### **Recommended Readings:**

1. “A Reader’s Digest Step by Step guide- Sewing and Knitting”, Reader’s Digest (Australia) Pty Ltd.
2. McCall’s, “Sewing in colour- Home dressmaking, Tailoring, Mending, soft furnishings, The Hamlyn Publishing group Ltd. (1963).
3. Armstrong, Joseph Helen, “Pattern Making for Fashion Design”, Prentice Hall, New Jersey.
4. Doongaji.S and Deshpande .R, “Basic Processes and Clothing Construction”, New Raj Book depot, New Delhi.
5. “The complete Book of sewing-A practical step by step guide to sewing techniques” Dorling Kindersley publication, (1996).
6. Aldrich W. “ Metric Pattern Cutting for Children’s and Babywear”, Blackwell Science Ltd. U.K. (1999)
7. Lewis V.S. “Comparative clothing construction techniques”, Surjeet Publication, Delhi. (1984)
8. Dantiyagi.S, “Fundamentals of Textiles and their Care,” Orient Longman Ltd, New Delhi.



**B.Sc. (Home Science) 4<sup>th</sup> Semester**  
**APPAREL CONSTRUCTION (PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

**Objectives:**

To enable the students to

1. Draft and construct different sleeves and collars.
2. Make samples of plackets and pockets.

**Instructions for paper setters:**

*Examiner is required to set two questions for adaptation and construction of any two samples from entire syllabus. Project work should not be included in question paper. Sloper of basic bodice block and sleeve block will be allowed.*

1. Drafting of Child's basic bodice block and sleeve block.
2. Adaptation and Construction of following sleeves:
  - a) Plain
  - b) Puff
  - c) Flare
  - d) Cap
3. Adaptation and Construction of following collars:
  - a) Baby
  - b) Peter-Pan
  - c) Mandarin
  - d) Cape
4. Construction of samples of the following:
  - i) Placket
    - a) One piece
    - b) Two piece
  - ii) Pocket
    - a) Patch
    - b) Inseam

**Project Work:**

Drafting and Construction of

- a) Panty
- b) Yoked frock with Peter-Pan Collar and Puff Sleeve

**Recommended Readings:**

1. "A Reader's Digest Step by Step guide- Sewing and Knitting", Reader's Digest (Australia) Pty Ltd.
2. McCall's, "Sewing in colour- Home dressmaking, Tailoring, Mending, soft furnishings, The Hamlyn Publishing group Ltd. (1963).
3. Armstrong, Joseph Helen, "Pattern Making for Fashion Design", Prentice Hall, New Jersey.
4. Doongaji.S and Deshpande .R, "Basic Processes and Clothing Construction", New Raj Book depot, New Delhi.
5. "The complete Book of sewing-A practical step by step guide to sewing techniques" Dorling Kindersley publication, (1996).
6. Aldrich W. " Metric Pattern Cutting for Children's and Babywear", Blackwell Science Ltd. U.K. (1999)
7. Lewis V.S. "Comparative clothing construction techniques", Surjeet Publication, Delhi. (1984)
8. Dantyagi.S, "Fundamentals of Textiles and their Care," Orient Longman Ltd, New Delhi.

**B.sc. (Home Science) 4<sup>th</sup> Semester**  
**APPLIED PHYSICS-II**  
**(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Instructions to Examiner**

- 1) Total nine questions to be set. Two questions from each unit and one compulsory question covering the whole syllabus may be set in the form of objective type/ fill in the blanks etc.
- 2) Total five questions to be attempted (one from each section and one compulsory question).
- 3) Each question carries 9 marks.
- 4) Internal choice can also be given.

**Objective:**

To provide knowledge regarding the applications of physics in day to day life.

**CONTENTS**

**Unit-I**

1. Photoelectric effect, Experimental study of photo electric effect.
2. Effect of intensity, potential and frequency on photoelectric current.
3. Laws of photoelectric emission.
4. Einstein's photoelectric equation and Explanation of laws of photoelectric emission on the basis of Einstein's equation.
5. Photo Electric Cell (phototube) and some of its applications.

**Unit-II**

6. LASERS- Introduction, Einstein's quantum theory of radiation-Spontaneous emission, Spontaneous absorption and Stimulated emission.
7. Common components of all Lasers, Lasing Action
8. Application/Uses of Lasers-Medical , Scientific, Industry and Commercial
9. Laser Fundamentals, Laser Hazards
10. MASERS-Introduction, Production of Masers.
11. Applications of Masers.

### **Unit-III**

12. Brief account of Atomic Nucleus, Atomic Number, Mass Number, Nuclide, Nuclear charge, Nuclear size and Nuclear density.
13. Isotopes, Isobars and Isotones-Definition and examples. To calculate number of protons, neutrons, electrons, atomic number and mass number in a given element .Einstein's Mass-Energy relationship.
14. Nuclear forces, Characteristics of Nuclear forces.
15. Elementary idea about Radio Activity – Natural & Artificial, Definition of Half life and average life of a radioactive substance, Units of radioactivity .
16. Radioisotopes and their uses in Medicine, Industry, Agriculture. Carbon dating.

### **Unit-IV**

17. Nuclear reactions- Nuclear Fission and Fusion, Difference between the two.
18. Brief idea about Controlled and Uncontrolled chain reactions. Conditions for self propagating Chain reaction and Neutron Reproduction Factor.
19. Nuclear Reactor – Principle, Construction and Working.
20. Some uses/ applications of Nuclear Reactor.
21. Short notes on Radiation hazards and Safety Measures.

**B.sc. (Home Science) 4<sup>th</sup> Semester**  
**APPLIED PHYSICS-II**  
**(PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 25**  
**Paper : 20**  
**Internal Assessment : 05**

**Instructions to Examiner**

- Two practicals to be performed. One compulsory and one of student's choice (from different categories).
- Both the practicals carry equal marks.
- Separate marks for practical file and viva- voce.

**Contents:**

- 1) Measurement of area, volume and total surface area of a glass slab using Vernier Callipers.
- 2) Measurement of Internal diameter, depth and volume of a beaker using Vernier callipers .
- 3) Measurement of diameter of a metal wire using a screw gauge and find its volume.
- 4) Measurement of length and diameter of a rice grain using screw gauge.
- 5) To find resistance and power of a glowing bulb and to calculate energy consumed by it in given hours.
- 6) To verify Ohm's law.
- 7) To study a circuit breaker.

**#Books Recommended(Theory & Practical)**

- 1) A very M., Household Physics.
- 2) Duggal & Wadhawan, Principles of Physics (XI, XII).
- 3) Gomber & Gogia, Pradeeps Fundamental Physics (XI, XII).
- 4) Gupta S.K., Modern's ABC of Physics (XI, XII).
- 5) Khanna & Bedi, Textbooks of Sound.
- 6) Lal S., Fundamental Physics (XI, XII).
- 7) Mohindroo K.K., Basic Concepts of Physics.
- 8) Sachdeva & Duggal, Intermediate Physics.
- 9) Gupta S.C., New Fundamental Practical Physics.
- 10) Gupta S.K., ABC of Practical Physics (XI, XII).
- 11) Jaiswal J.N., Comprehensive Practical Physics (XI, XII).

**B.Sc. (Home Science) 4th Semester  
APPLIED CHEMISTRY -II  
(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Instructions to Examiners**

- Total nine questions to be set out of which five to be attempted (two questions from each unit)
- One compulsory question covering the whole syllabus may be set in the form of objective/ fill in the blanks/ short notes etc.
- Each question carries 9marks.
- Internal choice can also be given.

**Objective:**

To make the students aware of the basics and applications of chemistry in every day life.

**Unit-I**

1. Alcohols- Properties and uses of ethyl alcohol, idea about methylated spirit, absolute alcohol and power alcohol.
2. Properties and uses of acetic acid.

**Unit-II**

1. Properties and uses of Benzene , Phenol.
2. Preparation and uses of Benzene diazonium chloride.

**Unit-III**

1. Cosmetics: Brief study and elementary idea about ingredients- cold cream, vanishing cream, lipstick, mascara, depilatories. Use of fluoride toothpaste and chemistry of cold cream.
2. Chemistry in medicine: Anti pyretics and Sulpha drugs.
3. Food Additives.

## Unit-IV

1. Polymerization and Polymers- Definition and classification.
2. Polymers in textiles: Chemistry of synthetic fibers- Nylon, Polyester and Acrylic fibers.
3. Fertilizers: Nitrogen, Potassium and Phosphorus.

### **Suggested books:**

1. Applied Chemistry for Home science and Allied science by Thanamma Jacob
2. NCERT books of +1 and +2.
3. Engineering books by Jain and Jain.
4. Modern approach to Chemistry Volume -1
5. Modern approach to Chemistry Volume -2

### **B.Sc. (Home Science) 4<sup>th</sup> Semester APPLIED CHEMISTRY -II (PRACTICAL)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks :25**  
**Paper :20**  
**Internal Assessment :05**

1. Elemental detection of organic compound- nitrogen, halogen and sulphur.
2. Determination of melting point and boiling point of organic compounds.
3. Determination of degree of hardness of tap water volumetrically.
4. Silver mirroring.
5. Qualitative analysis of sugar (reducing and non-reducing)

**B.Sc. (Home Science) 4<sup>th</sup> Semester**

**PHYSIOLOGY AND PROMOTIVE HEALTH - II  
(THEORY)**

**Credit Hours: 2/week**  
**Duration of Exam: 3hours**

**Maximum Marks : 50**  
**Paper : 45**  
**Internal Assessment : 05**

**Objectives:**

1. To gain knowledge about health, hygiene, common diseases.
2. To study about environmental pollutants (air and water).
3. To understand basic functioning of various systems of human body.

**Instruction to the paper setter:**

1. Each theory paper will be of three hours duration.
2. Questions paper will have four section and units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Students will attempt one question from each unit and the compulsory question (Total of five questions).
4. All questions may carry equal marks, unless specified.

**UNIT I**

5. Excretory System:
  - Structure and function of kidney
  - Formation of urine
6. Endocrine Glands:
  - Structure, hormones and functions of the following glands:  
Pituitary, thyroid, parathyroid, adrenal, pineal and pancreas.

**UNIT II**

7. Reproductive System:
  - Structure and functions of male and female sex organs.
  - Ovarian and menstrual cycle.
  - Methods of contraception



8. Nervous System:

- Structure of Neuron
- Nerve Impulse.
- Cerebrospinal fluid.
- Cranial and Spinal Nerves
- Autonomic nervous system.

### UNIT III

9. Immune System:

- Types of Immunity
- Concept and importance of Immunization
- Immunization schedule

10. Diseases: Cause, mode of spread, incubation period, symptoms and control of:

Diseases spread by inhalation/droplet infection

- Mumps
- Measles
- Pulmonary Tuberculosis
- Chickenpox
- Influenza

Diseases caused by ingestion/oral-fecal route

- Enteric Fever
- Cholera
- Dysentery
- Diarrhoea

Diseases caused by insects/vectors

- Malaria
- Plague

Sexually transmitted disease:

- AIDS

## UNIT IV

### 11. Pest control:

- Control and eradication of flies, cockroaches, rodents and other pests
- Use of disinfectants for floors, working surfaces, kitchen equipment, dish washing.
- Importance and hazards of aerosol sprays for disinfection

### 12. Water:

- Contamination of water
- Hazards of water pollution
- Household and commercial methods of purification and water quality standards.

### RECOMMENDED READINGS:

Sunetra Roday. Food Hygiene and Sanitation with case studies. 2<sup>nd</sup> Edition. Mc GrawHill. 2011.

Evelyn Pearce. Anatomy and Physiology for Nurses, Jaypee brothers, New Delhi 1987.

Chaterjee. Human Physiology, Calcutta Medical Agency. 1988.

Guyton Arthm .C.Text Book of Medical Physiology, London W.B. Saunders Co.1999.

Yash Pal Bedi. Hygiene and public health. Atma ram and sons. 10<sup>th</sup> Edition. 1970.

J.E.Park- Preventive and Social Medicine. Banarsidas Bhanot Publishers, Jabalpur(India), 15<sup>th</sup> Edition.

Ganong WF. Review of Medical Physiology, 22<sup>nd</sup> ed. McGraw Hill. 2005.

Ross and Wilson. Foundation of Anatomy and Physiology, 6<sup>th</sup> ed. Medical Division of Longman Group Ltd. 1987.

Jain, A K. Textbook of Physiology (5<sup>th</sup>ed.). Avichal Publishing Company. Vol I and Vol II. 2012

**B.SC. (HOME SCIENCE) 4<sup>th</sup> Semester**  
**Physical Education**  
**(Practical)**

**Credit Hours: 2 /week**  
**Duration of Exam: 3 hours**

**Grade: S/US**

**Instruction to the Examiner:**

The examiner shall consider annual assignment of the student, physical education practical file, take practical exam & viva voce based on syllabus for grading the students performance in the examination.

**Objectives:**

1. Wholesome development of an individual.
2. Knowledge of basic techniques involved in athletic events.
3. Practical knowledge of techniques, breathing pattern and do's and don'ts of various asanas.
4. Knowledge of Paralympics games, prominent player and Awards.

UNIT-I

1. Athletic meet – Meaning, Need and Importance
2. How to organize athletic meet at College level.
3. First Aid-meaning and its practical Application in day to day life and sports injuries

UNIT- II

Field Event : Jump- High Jump

- [a] Dimensions and specification of equipment used
- [b] Techniques
- [c] Fouls

UNIT- III

Any two Asana out of the Following:

- [a] Dhanurasana
- [b] Chakrasana
- [c] Vajrasana
- [d] Matasayasana

UNIT - IV

- [a] Brief knowledge of Paralympics.
- [b]. Knowledge of prominent players of Paralympics games.

[c] Brief knowledge of Awards and Honors in Various Games

REFERENCES:

1. A Text Book of Physical Education and Sports by Atwal and Kansal.
2. Kaur, Nirmaljit (2003). Essentials of Physical Education. Ludhiana: Kalyani Publishers.
3. Malik, Neeru and Malik, Rakesh (2005). Health and Physical Education. Gurusar Sadhar: GBD Publications.
4. Rule Book of Athletics by Amateur Athletic Federation of India.
5. Book of Rules of Games and Sports. National Council of YMCA of India.
6. Various search engines found on internet.

**B.SC. (HOME SCIENCE)4<sup>th</sup> Semester**  
**MUSIC (VOCAL)**  
**Practical**

**Credit Hours: 2 /week**

**Grade: S/US**

**Duration of Exam: 3 hours**

**Instructions to Examiner:**

*The examiner shall consider music practical file practical based on syllabus and viva-voce for the grading the students performance..*

**Objectives:**

- Introduction of *Swara, raga, Taal, alankars*
- To develop interest in classical music.

**UNIT- I**

Two fast khayals with Alap and Taans of the following Ragas

- A) Bihag
- B) Malkauns.

**UNIT- II**

One Lakshan geet in any raag of prescribed syllabus

**UNIT- III**

The following taals with Ekgun and Dugun with Bols on hand

- A) Tilwara
- B) Deepchandi

**UNIT- IV**

Life sketeches of Musicians

- A) Ustaad bade Gulam Ali Khan
- B) Ustad Jakir Hussain

**Recommended Readings:**

1. Harish Chander Shrivastava (1993): Rag Prichaya Part – II, Sangeet Sadan Parkashan, 88, South Malaka, Allahabad.

2. Harish Chander Shrivastava (1993) : Rag Prichaya Part – III, Sangeet Sadan Parkashan, 134, South Malaka, Allahabad.
3. Pandit Vishnu Narayan Bharkande (1989): Hindustani Sangeet Padhhti Part II Sangeet Karyalaya, Hathras (UP).
4. Pandit Vishnu Narayan Bharkande (1988): Hindustani Sangeet Padhhti Part III Sangeet Karyalaya, Hathras (UP).
5. Lakshmi Narayan Garg: Hindustani Sangeet Padhhti Part III Sangeet Karyalaya, Hathras (UP).
6. Shri Prabhu Lal Garg Basant: Sangeet Karyalaya, Hathras (UP)
7. Search engines on internet.

**B.SC. (HOME SCIENCE)4<sup>th</sup> Semester**  
**DANCE**  
**(Practical)**

**Credit Hours: 2 /week**

**Grade: S/US**

**Duration of Exam: 3 hours**

**Instructions to paper setters:**

*The examiner shall consider dance practical file, practical based on syllabus and viva-voce for the grading the students performance..*

**Objectives:**

- Whole some development of individual.
- Introduction to *laya and Taal*.

**UNIT- I**

**Teen Taal**

- A. Paran 1
- B. ChakradarTora 1
- C. ChakradarParan 1
- D. Kavit 1

**UNIT- II**

**Chautal**

- A. Paran 1
- B. Kavit 1
- C. ChakradarTora 1

**UNIT- III**

**2 Gatnikar in Teen Taal**

**UNIT- IV**

Practical demonstration of 10 Asamyukta and 10 Samyukta Hasta Mudra.

**Recommended Readings:**

1. Kathak Nritya Shiksha part-I by Dr. Puru Dadhich.
2. Kathak Nritya Shiksha part-II by Dr. Puru Dadhich.

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