FACULTY OF SCIENCE
SYLLABI

FOR

B.Sc. Home Science (1st, 2nd, 3rd & 4th SEMESTER)

Common to all streams

EXAMINATIONS 2019-20

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### B.Sc. Home Science – 1st Semester
(Common to all Streams)

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<tr>
<th>Sr. No.</th>
<th>Paper/ Subject</th>
<th>Credit Hours</th>
<th>Theory Marks</th>
<th>Practical Marks</th>
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<td>Environment, Road Safety Education And Violence Against Women And Children</td>
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<td>Physical Education/ Music/Dance</td>
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**TOTAL** | 32 | 750

*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.
(5 x 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 Conjurer’s Revenge
- I Have A Dream
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, cyanocobalaminB₁₂, 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) Augratin  J) Fold in  q) Roasting
d) Batter  k) Garnish  r) Sautè
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                         Maximum Marks- 50
Duration of exam: 3 hours                   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:

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.  

Unit-IV

8. Influence of environmental deprivation and stimulation on growth and development of children.
Recommended Readings:


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:


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

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**

INTRODUCTION TO CLOTHING AND TEXTILES - I
(THEORY)

Maximum Marks- 50
Paper- 45
Internal Assessment- 05

Credit hours -2 /wk

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 form 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

- 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 -
- “A Reader’s Digest Step by Step guide- Sewing and Knitting”, Reader’s Digest (Australia) Pty Ltd.
INTRODUCTION TO CLOTHING AND TEXTILES - I
(Practical)

Maximum Marks- 50
Credit hours -2 /wk
Duration of exam -3 hrs

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 -
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)
11. Sham Singh: Fruit Cultivation in India.
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 & linseed.
   iii) Condiments & Spices: Clove, cardamom, cinnamon, cumin, coriander, fennel, pepper & turmeric
RECOMMENDED READINGS:-

1. B. Choudhary: Vegetables (National Book of India, New Delhi 1979)


11. Sham Singh: Fruit Cultivation in India.


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

APPLIED ZOOLOGY-I

(THEORY)

Credit Hours : 2 hours/ week
Total marks : 50
Duration of Exam : 3 hours
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. *Trypansoma 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 Wucheria bancroftii*: 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.
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

15. Elementary knowledge of Sericulture.
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 Total marks : 50
Duration of Exam : 3 hours 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.
7. Project report on field visit to renowned poultry
Books Recommended
7. Sardar Singh: Bee- Keeping in India, ICAR (1972).
10. Naidu, P.M.N.: Poultry keeping in India (1976), ICAR

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

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
(THEORATICAL 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.


Section II
(PRACTICAL)

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.


Recommended Readings:-


B.SC. (HOME SCIENCE) FIRST 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 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:
2. Rule Book of Athletics by Amateur Athletic Federation of India.
3. Rule Book of Badminton by Badminton 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 Grade: S/US
Duration of Exam: 3 hours

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:
7. Search engines on internet.
B.SC. (HOME SCIENCE) FIRST SEMESTER

DANCE  
(Practical)

Credit Hours : 2 Hrs/week       Grade: S/US  
Duration of Exam: 3 hours

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, Kavit:1

2. Practical demonstration of ten hand movements with their function  
3. Ability to play Teen taal on table.  
4. Description of various Gharanas of Kathak.

REFERENCES:  
1. Kathak Nritya Shiksha Part-I, by Puru Dadheish  
2. Kathak Nritya Shiksha Part-II, by Puru Dadheish
# B.Sc. Home Science – 2nd Semester
*(Common to all Streams)*

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<td>Applied Botany - II</td>
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<td>7</td>
<td>Applied Zoology -II</td>
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<td>Computer Applications</td>
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<td>9*</td>
<td>Environment, Road Safety Education And Violence Against Women And Children</td>
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<td>Physical Education/Music/Dance</td>
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<td>32</td>
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*The syllabus and marks will be as per Panjab University norms*
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:

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 50 marks comprising of fifty 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)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
5. How to obtain Driving License.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.

Note: Examination Pattern:

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: Unit I (Environment) and Unit II (Road Safety).
- 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 i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

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

Websites:
(a) www.chandigarhpolicen.nic.in
(b) www.punjabpolice.gov.in
(c) www.haryanapolice.gov.in
(d) www.hppolice.nic.in
SYLLABUS ON “VIOLENCE AGAINST WOMEN & CHILDREN” AT UNDERGRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. 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.

2. 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 354A is added; 354B (Assault or use of criminal force to women with intent to disrobe); 354C Voyeurism; 354D (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

3. Protective Laws for Women:


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 30 Marks.
- It shall have 30 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 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
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 Conservation
- 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                                                                                                       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. 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
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:

INTRODUCTION TO HUMAN DEVELOPMENT-II
(Theory)

Credit Hours: 2/week                                           Maximum Marks: 50
Time: 3 Hours                                                  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.

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:


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:


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
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**

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 form 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 -

- “A Reader’s Digest Step by Step guide- Sewing and Knitting”, Reader’s Digest (Australia) Pty Ltd.
INTRODUCTION TO CLOTHING AND TEXTILES -II
(Practical)

Maximum marks- 50
Credit hours -2 /wk
Duration of exam -3 hrs

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 -
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)
11. Sham Singh: Fruit Cultivation in India.
B.Sc. Home Science (Pass Course) Semester-II
APPLIED BOTANY-II
(PRACTICAL)

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

1. Preparation of temporary slides of Rhoeo 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
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, Aloevera & 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


11. Sham Singh : Fruit Cultivation in India.


B.Sc. Home Science (Pass Course) Semester-II

APPLIED ZOOLOGY-II

(THEORY)

Credit Hours : 2 hours/week Total marks : 50
Duration of Exam : 3 hours 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.
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
7. Human genetics
   • An Elementary knowledge ABO and Rh Blood groupings.
   • An Elementary knowledge of Genetic basis of blood groups( ABO and Rh)
8. 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

7. An elementary knowledge of Gene, Genome and Genomic.
8. An elementary knowledge of Genetic engineering.
10. An elementary Knowledge of Polymerase Chain Reaction(PCR)

Unit-IV

11. An elementary knowledge of Biotechnology.
12. An elementary knowledge of Stem cell research.
13. An elementary knowledge of AIDS and its control.
15. An elementary Knowledge of Swine Flu.

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

APPLIED ZOOLOGY-II

(PRACTICAL)

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

1. Blood grouping( ABO)
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

B.Sc. (Home Science) Second Semester

COMPUTER APPLICATION
(PRACTICAL)

Credit Hours: - 2 / Week
Maximum Marks - 50
Duration of Exam: - 03 Hours
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

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:-

B.SC. (HOME SCIENCE) SECOND 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 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:
2. Rule Book of Athletics by Amateur Athletic Federation of India.
3. Rule Book of Badminton by Badminton 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       Grade: S/US
Duration of Exam: 3 hours

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:
7. Search engines on internet.

B.SC. (HOME SCIENCE) SECOND SEMESTER

DANCE
(Practical)

Credit Hours : 2 Hrs/week        Grade: S/US
Duration of Exam: 3 hours

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 laykaries
   Amad:1, Tora:4, Paran:2, Kavit:1

2. Practical demonstration of ten hand movements with their function
3. Ability to play Teen taal on table.
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 Puru Dadheish
2. Kathak Nritya Shiksha Part-II, by Puru Dadheish
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ART IN EVERYDAY LIFE
(THEORY)

B.Sc. (Home Science) 3rd Semester

Credit Hours: 2/week
Duration of Exam: 3 hours
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) 3rd Semester

ART IN EVERYDAY LIFE
(PRACTICAL)

Credit Hours: 2/week      Maximum Marks : 25
Duration of Exam: 3 hours       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.
11. Still life
12. Importance of 3- dimensional designs
REFERENCES

5. A brief history of Indian Painting- Dr. L.C. Sharma, Publishing House Meerut.
B.Sc. (Home Science) 3rd Semester
APPLIED NUTRITION - I
(THEORY)

Credit Hours: 2/week
Maximum Marks : 50
Duration of Exam: 3hours
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:

- WHO Technical Reports Series for different Nutrients.
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) 3rd Semester
Development in Infancy
(Theory)

Credit Hours: 2/week  Maximum Marks : 50
Duration of Exam: 3hours  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

2. Factors affecting cognitive development in infancy.

Unit II

3. Language development in Infancy – Pre speech forms of communication.
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

References:
Instruction 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:

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- Cornices, Valances, Swag, Jabot, Cascade

**UNIT-IV**

8. Selection criteria for furniture.

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

**References**

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, Dinning 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) 3rd Semester

FABRIC CONSTRUCTION (THEORY)

Credit Hours: 2/week      Maximum Marks : 50
Duration of Exam: 3hours    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


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.
Objective:
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.
B.sc. (Home Science) 3rd Semester
APPLIED PHYSICS-I
(THEORY)

Credit Hours: 2/week  
Maximum Marks : 50
Duration of Exam: 3hours  
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

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

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.
13. Simple numericals with direct substitution. (v-n-T).

Unit-IV

15. Production of Transverse stationary waves in a stretched string, Laws of Transverse vibrations of a stretched string.
17. Short notes on Human voice organ, Sound Insulation, Hearing aids, Acoustics of Buildings.
B.Sc. (Home Science) 3rd Semester
APPLIED PHYSICS -I
(PRACTICAL)

Credit Hours: 2/week  Maximum Marks : 25
Duration of Exam: 3 hours  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.
B.Sc. (Home Science) 3rd 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 9 marks.
- 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 (definition & simple picture based on electron- dot picture) eg: O₂, HCl, Cl₂, CaO, NH₄⁺, H₃O⁺, MgF₂, CH₄, C₂H₄, C₂H₂, H₂O, H₂, NH₃

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.


Unit-IV

1. Properties and uses of Methane (CH\textsubscript{4})

2. Properties and uses of ethylene (C\textsubscript{2}H\textsubscript{4})

3. Properties and uses of Acetylene (C\textsubscript{2}H\textsubscript{2})

Suggested books:

1. Applied Chemistry for Home science and Allied science by Thancamma 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) 3rd Semester
APPLIED CHEMISTRY - I
(PRACTICAL)

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

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                                               Maximum Marks : 50
Duration of Exam: 3hours              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:


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


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 Commonwealth Games and current national records in Athletics
[b] Knowledge of prominent players of the games in syllabus

REFERENCES:
2. Rule Book of Athletics by Amateur Athletic Federation of India.
3. Rule Book of Badminton by Badminton 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:
7. Search engines on internet.
B.Sc. (Home Science) 3rd 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. 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

2. Kathak Nritya Shiksha Part-II, by Puru Dadheis
## B.Sc. Home Science – 4th Semester

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<th>Credit Hours</th>
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B.Sc. (Home Science) 4th 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) 4th Semester

ART IN EVERYDAY LIFE
(PRACTICAL)

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

5. A brief history of Indian Painting- Dr. L.C. Sharma, Publishing House Meerut.
B.Sc. (Home Science) 4th Semester

APPLIED NUTRITION - II
(THEORY)

Credit Hours: 2/week      Maximum Marks : 50
Duration of Exam: 3hours    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.

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:

- WHO Technical Reports Series for different Nutrients.
B.Sc. (Home Science) 4th Semester

APPLIED NUTRITION - II
(PRACTICAL)

Credit Hours: 2/week  Maximum Marks: 25
Duration of Exam: 3 hours  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) 4th Semester
Development in Early Childhood
(Theory)

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

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

Unit II
Unit III

5. Language Development in early childhood years.

Unit IV

7. Play – importance and types.

References:
B.Sc. (Home Science) 4th Semester
Development in Early Childhood
(Practical)

Credit Hours: 2/week
Maximum Marks: 25
Duration of Exam: 3 hours
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 boys.
   - 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:
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


7. Kitchen planning- its need, Type of kitchen plans, Work triangle, Standard measurement.

UNIT-IV


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: 3 hours

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) 4th Semester

APPAREL CONSTRUCTION

(THEORY)

Credit Hours: 2/week  Maximum Marks: 50
Duration of Exam: 3hours  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.
B.Sc. (Home Science) 4th Semester

APPAREL CONSTRUCTION (PRACTICAL)

Credit Hours: 2/week  Maximum Marks: 25
Duration of Exam: 3 hours  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.
B.sc. (Home Science) 4th Semester
APPLIED PHYSICS-II
(THEORY)

Credit Hours: 2/week                     Maximum Marks : 50
Duration of Exam: 3hours                 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
9. Laser Fundamentals, Laser Hazards
10. MASERS-Introduction, Production of Masers.
11. Applications of Masers.
Unit-III

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.

Unit-IV

17. Nuclear reactions- Nuclear Fission and Fusion, Difference between the two.
20. Some uses/applications of Nuclear Reactor.
21. Short notes on Radiation hazards and Safety Measures.
B.sc. (Home Science) 4th Semester
APPLIED PHYSICS-II
(PRACTICAL)

Credit Hours: 2/week      Maximum Marks : 25
Duration of Exam: 3hours    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.
9) Gupta S.C., New Fundamental Practical Physics.
10) Gupta S.K., ABC of 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.

**Suggested books:**

1. Applied Chemistry for Home science and Allied science by Thancamma 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

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

PHYSIOLOGY AND PROMOTIVE HEALTH - II
(THEORY)

Credit Hours: 2/week                                      Maximum Marks : 50
Duration of Exam: 3hours                                    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:


B.SC. (HOME SCIENCE) 4th Semester
Physical Education
(Practical)

Credit Hours: 2 /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, 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] Matasayasan

UNIT - IV

[a] Brief knowledge of Paralympics.
[b]. Knowledge of prominent players of Paralympics games.
Brief knowledge of Awards and Honors in Various Games

REFERENCES:

6. Various search engines found on internet.
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:
South Malaka, Allahabad.
7. Search engines on internet.

B.SC. (HOME SCIENCE)4th 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:
2. Kathak Nritya Shiksha part-II by PuruDadheish.

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