FACULTY OF SCIENCE

SYLLABI

FOR

B.Sc. HOME SCIENCE – APPAREL & TEXTILE DESIGN

2ND & 3RD YEAR

EXAMINATIONS, 2012

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# B.Sc. (Home Science) APPAREL & TEXTILE DESIGN- II YEAR

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<th>SUBJECT NAME</th>
<th>CREDIT HOURS</th>
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<td>Music / Dance / Physical education</td>
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**Qualifying Paper**
Objectives:

- To introduce basic concepts of 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

- Types of soil and soil operations- Tillage, Drainage, Hoeing, Mulching and Irrigation
- Elementary knowledge about Mushroom cultivation

Unit-II

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

Unit-III

- Seed Propagation.
- Vegetative propagation by artificial methods like: cutting, layering, grafting & budding.
- Elementary Knowledge about plant tissue culture.
- Elementary knowledge about cultivation, maintenance and care of Bonsai.

Unit-IV

- NAME DISTRIBUTION, PART USED & USES OF THE FOLLOWING:
  i. Fibres: Cotton, Jute & Flax.
  ii. Beverages: Tea, Coffee & Cocoa
  iii. Oils: Coconut, Mustard, ground Nut, Castor Oil & linseed.
  iv. Medicinal Plants: Holy basil, Mint, Ashwagandha, Amaltas, Aloe Vera & Amla
  vi. Condiments and Spices: Clove, Cinnamon, Cumin Cardamom, Coriander, Fennel, Pepper & Turmeric.
1. Preparation of temporary slides of Rhoeo and Onion peel to study the cell structure, stomata and chloroplast.

2. Study of Garden implements (Garden Tools & accessories.)
   3. To prepare a pot for sowing seeds and study different methods of seed sowing.
   4. To prepare a seed bed for raising seedlings.
   5. To prepare a bed of potato sowing and cultivation
   6. To prepare a bed for cultivation vegetables like onion, cauliflowers, Brinjal & tomato.
   7. To prepare a pot of repotting for chrysanthemum.

   4.1. Propagation of roses by cutting and budding.
   4.2. Propagation by whip & tongue grafting.
   4.3. Propagation by wedge grafting.
   4.4. Propagation of crotons & coleus by cutting.


6. Economy Botany: Identify sketch & write short notes on the following:
   6.4. Medicinal Plants: Tulsi, Mint, Amla, Ashwagandha, Aloe Vera & Amalathas.
   6.5. Condiments & spices: Clove, cardamom, Cinnamon, Cumin, Coriander, fennel, pepper & Turmeric.

   - Herbarium: Collection of 25 specimens of ornamental plants.
   - Visit to herbal parks and forest to study flora in natural habitat, if possible.
INSTRUCTIONS TO THE EXAMINER:

1. Total nine questions to be set. At least two from each unit.
2. Out of which five questions to be attempted.
3. One compulsory questions can be set covering the whole syllabus. Which can be fill in the blanks/Multiple choice/objective type/one word answers etc.

- Herbarium: Collection of 25 specimens of ornamental plants.
- Visit to Herbal parks and forests to study flora in natural habitat, if possible.

Recommended Readings:

1. B. Chaudhary: Vegetables(National Book of India, New Delhi, 1979)
2. Breikell C. 1993, Step by Step Gardening Technique( Royal Horticultural Society’s Encyclopaedia of Practical Gardening)
5. Gopalaswamianger K.S 1991 Complete Gardening in India (Messers Nagraj and Co. Madras)
11. Sham Singh: Fruit Cultivation in India.
B.Sc. Home Science Part-II

APPLIED LIFE SCIENCES

(b) ZOOLOGY

THEORY

Time : 2 hours Teaching per week

Max. Marks : 50

Exam: 3 Hours

Paper:45

Int. Assessment: 05

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

UNIT-I

1. An elementary study of the following animals as indicated:
   - Malaria parasite: Detail life history and mode of transmission
   - Entamoeba histolytica, Trypansoma gambiense: Habit distribution, disease produced and mode of transmission.

2. External feature life history and economic importance of the following:
   - Taenia solium, Ascaris lumbricoides,

3. External feature life history and economic importance of Earthworm

UNIT-II

4. Pest
   - Life history and economic importance of insect pest: Rice weevil sytophillus, Rizopertha, Gram dhora, and Tribolium.
   - Control of insect pest: Cockroach, Termite.
   - Control of non-insect pest: Rat.

5. Economic important insect
   - Habit habitat and life history only: Honey bee, Silk moth
   - Habit habitat and life history only: Mosquito( Culex & Anopheles).

6. Economic Zoology: Elementary knowledge of the following
   - Apiculture
   - Sericulture
   - Vermiculture
UNIT-III

7. Human Genetics:
   - Structure and Function of DNA & RNA
   - Structure of human Chromosomes their variation.
   - Genetic basis of blood groups (ABO)
   - Autosomal and sex chromosomal abnormalities.
   - Elementary knowledge of Genetic basis of common hereditary diseases such as Haemophilia, Colorblindness, Mongolism, Diabetes, Thalassemia.
   - Genetic counseling.

8. An elementary knowledge of Gene, Genome and Genomic.

9. An elementary knowledge of Genetic engineering & Transgenic product (Bt-Products, Golden Rice, Flavr-Savor Tomato).

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.

APPLIED LIFE SCIENCES

(b) ZOOLOGY: PRACTICAL

Time: 2 hour teaching per week
Max. Marks: 50

Exam: 3 Hours
Paper: 45

Int. Assessment: 05

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, . Available insect pest and their life stages.

3. Preparation of temporary mounts of mouth parts of cockroach

4. Visit to Poultry farm.

5. Blood grouping (ABO)

6. Demonstration of Extraction of DNA and staining it with Ethidium Bromide.

7. Demonstration of Polymerase Chain Reaction (PCR)


10. Project report on field visit to renowned laboratory/ poultry
Books Recommended

7. Lodish, Berk, Matsudairy, K\(\text{ae}r\)s, Scott, Zipursky,Darnell: Molecular Cell Biology(2003)
16. Naidu,P.M.N.: Poultry keeping in India(1976),ICAR

INSTRUCTIONS FOR EXAMINER:

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:

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.
Unit – I

Essentials of Chemistry

- Symbols, formulae, valency and variable valency, elementary idea of empirical formulate and molecular formulae (no numerical) definition of atomic weight and molecular weight.
- Chemical equation and reaction: Parts, types, essential of chemical equation, balancing of equation by hit and trial method and their removal, exothermic and endothermic, catalytic and reversible reactions.
- Chemical Bonding: Definition of chemical bond, cause of chemical combination, types of chemical bonds-ionic bond, covalent bond, co-ordinate bond (def & simple examples based on electron dot picture) examples include H2, C12, HCl, O2, NH3 H2O, CH4, C2H2 MgF2, CaO, NH4+, H3O+.

Unit – II

- Elementary idea about normality, formality, morality, strength of solution, mole fraction and ppm.
- Elementary idea about pH of water, hard water (causes and types) heavy water with its uses.

Unit – III

- Properties and uses of CH 4, C2H2.
- Alcohols – Properties and uses of ethyl alcohol, idea about methylated spirit.
- Properties and uses of Acetic acid.

Unit – IV

- Cosmetics: - Brief study and elementary idea about ingredients- cold cream, vanishing cream, lipstick, mascara, depilatories and dentifrices. Use of fluoride toothpaste and chemistry of cold cream.
- Chemistry in medicine- Anti pyritics, Sulpha drugs and anti malarial drugs.
- Polymers – Definitions and classification.
- Polymers in textiles: Chemistry of synthetic fibers- Nylon, Polyester and Acrylic fibers.
- Fertilizers: - Nitrogen, Potassium and Sulphur.
Elementary idea about paints, varnishes, lacquers, enamels, emulsion paints, pigments, valve concentration, failure of paint film.

**Instruction 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.

**APPLIED PHYSICAL SCIENCES**

**PAPER – A: CHEMISTRY (PRACTICAL)**

Teaching Period: 2 hrs/week  
Exam Time: 3 hrs.  
M. Marks: 50  
Paper: 45  
Int. Ass.: 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. Elemental detection of organic compound- nitrogen, halogen and Sulphur.
5. Determination of melting point and boiling point of organic compounds.
6. Analysis of amide group, amine group and carbohydrate group in given organic compound.
7. To determine the normality and strength of given alkali solution.
10. Visit to industrial unit if permissible

**Suggested books:**

- Applied chemistry for Home Science and Allied science by Thanhamm Jacob
- NCERT books of + 1 and + 2.
- Engineering books by Jain and Jain.
B.Sc. Home Science Part-II  
APPLIED PHYSICAL SCIENCES  
PAPER-B: PHYSICS (THEORY)  

Teaching Time : 2 hours/ week  
Exam Time : 3 hours  
Total marks : 50  
Paper (Theory) : 45  
Internal Assessment : 5

CONTENTS

Unit-I  
**Mechanics:**
- Intermolecular forces, Types of intermolecular forces – Force of Adhesion & Force of Cohesion, Molecular range, Sphere of Influence, Surface film, Surface tension, molecular theory of surface tension, detergents and surface tensions, common illustrations/ applications of surface tension.
- Definition of Capillary and Capillarity, practical applications of Capillarity in everyday life.

Unit-II  
**Sound:**
- Define – Periodic motion, Oscillatory motion, Vibration, Oscillation, Time period, Frequency, Amplitude, Wave motion and Wave length.
- Brief idea about transverse and longitudinal wave motion, difference between the two, υ-n relation (simple_numericals with direct substitution).
- Simple idea about superposition of waves, superposition principle and stationary waves, laws of vibrating strings, free, forced & resonant vibrations.
- Short notes on Human voice organ, sound insulation, hearing aids, acoustics of buildings.

Unit-III  
**Atomic Physics**
- Photoelectric effect, Experimental study of photo electric effect, Effect of intensity, potential and frequency on photo electric current, laws of photoelectric emission, photo electric cell and some of its applications.
- Introduction to LASER & MASER and some of their applications.
Unit-IV

Nuclear Physics

- Atomic Nucleus – Nuclear size, Nuclear density and Nuclear charge, Isotopes, Isobars and Isotones, Nuclear force and some features of Nuclear force, Elementary idea about radio activity – Natural & Artificial, Radioisotopes and their uses in medicine, industry, agriculture and dating.

- Nuclear fission and fusion, uncontrolled and controlled chain reactions, nuclear reactor – principle, construction & working, some uses/ applications of Nuclear Reactor, Radiation hazards and safety measures.

Instructions to Examiner

- 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 type/ fill in the blanks/ short notes etc.

- Each question carries 9 marks.

- Internal choice can also be given.

APPLIED PHYSICAL SCIENCES

PAPER-B: PHYSICS (PRACTICALS)

| Teaching Time   | 2 hours/ week | Total marks | 50 |
| Exam Time       | 3 hours       | Paper (Practical) | 45 |
|                 |               | Internal Assessment | 5 |

1) Measurement of diameter of a small spherical body using Vernier Callipers.

2) Measurement of area, volume and total surface area of rectangular body using Veiner Callipers.

3) Measurement of diameter of a Pen/ Pencil using a screw gauge.

4) Measurement of temperature in °C of a liquid at room temperature and high temperature and to convert to temperature in °F.

5) Measurement of temperature of human body in °C and °F.

6) To verify first law of transverse vibrations in a string using sonometer.

7) To verify second law of transverse vibrations in a string using sonometer.

8) To find velocity of sound at 0°C using first resonance position and by applying end correction.

9) To find velocity of sound at 0°C using two resonance positions.
10) To find resistance and power of a glowing bulb and to calculate energy consumed by it in given hours.

11) To verify Ohm’s law.

**Books Recommended**

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).

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.

**Practicals**:
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.

**Note**: Above 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topics from 2 to 11 and one each for the topics 1 and 12 to 15.

- **Examination Pattern**:
  Fifty multiple choice questions (with one correct and three incorrect alternatives and no marks deduction for wrong answer or un-attempted question)

- All questions compulsory i.e. no choice.

- Qualifying marks 33 per cent i.e. 17 marks out of 50.

- Total marks: 50.

- Duration of Examination: 60 minutes.

- Spread of questions: Minimum of 2 questions from each of the topics 1 and 12 to 15. Minimum of 4 questions from topics 2 to 11.
TEXTILE SCIENCE (THEORY)

3 Hrs/Wk

M. Marks: 75
Int. Ass: 10
Paper: 65

Instructions for the paper setter:

1. Each theory paper will be of three hours duration.
2. Questions paper will have four sections.
3. A total of Nine questions comprising of two questions from each unit and one compulsory questions 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.

UNIT-1

1. Classification of Textile fibers

2. Types of Polymers.
   Molecular arrangements and orientation of polymers
   Essentials of fibers forming polymers
   Physical and chemical properties of fiber in general.

3. Textile Fibers- Manufacturing and properties
   Natural- Cotton, Linen, Silk and Wool.
   Manmade- Rayon, Acetate, Polyester, Nylon, Acrylic, Elastomeric fibers, lycra, tincel.

UNIT-II

4. Yarn construction:
   a. Mechanical spinning
   b. Chemical spinning-dry, wet, melt, bicomponent, biconstituent, emulsion and solution
   c. Classification of yarn, their properties and uses
      1) Simple, 2) Novelty 3) Bulk and textured yarn

UNIT-III

6. Fabric finishes
   Bleaching, scouring, singeing, tentering, mercerizing, calendaring, napping, flocking, acid and basic finishes.
7. Special finishes
   Antistatic, bacteriostatic, moth proofing, shrinkage control, flame retardant, water
   repellant and water proofing, soil and stain resistance, wash & wear and permanent
   press.

   UNIT-IV


References:

1. Introductory Textile Science, M L Joseph
2. Textile fabrics and their selection, Isabel B Wingate and June F Mohler
3. Textiles by Hollen Saddler- Macmillian publishing company, New York
4. Understanding Textiles by P S Tortora-Prentice Hall Inc., New Jersey
5. Fiber to fabric by Corbman.

TEXTILE SCIENCE ( PRACTICAL )

2 Hrs/Wk. M. Marks: 50
          Int. Ass:    05
          Paper:     45

Instructions for paper setters:-

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and the Sessional work will be of 05 marks each (10 marks)

1. Fiber identification- Physical, microscopic, burning and chemical test.
2. Yarn identification and yarn count
3. Fabric identification- (i) Thread count (ii) Weave
4. Stain removal
5. Market survey to see the availability of different yarns and fabrics of different weaves.

References:

Fiber to fabric by Corbman.
B.Sc. Home Science Part-II

TEXTILE DESIGN (THEORY)

3 Hrs/Wk. M. Marks: 75
Int. Ass: 10
Paper: 65

Objectives:

To impart knowledge about the –
1. Principles and elements of art.
2. Different dyes and printing techniques.

Instructions for the paper setter:

1. Each theory paper will be of three hours duration.
2. Questions paper will have four sections.
3. A total of Nine questions comprising of two questions from each unit and one compulsory questions 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

UNIT-I

* Definition of Motif and design: Types of Motifs.
* Elements of Art in relation to Textile Designing
  - Line form.
  - Colour & its dimensions (Hues, Values, Intensity)
  - Colour schemes
  - Texture.

UNIT-II

* Principles of design in relation to textile designing
  - Harmony
  - Proportion
  - Balance
  - Rhythm
  - Emphasis

* Optical Illusions created through elements of Arts and principles of Design.

UNIT-III

* Dyes-Classification, Dyeing Methods, Dyeing stages, Dyeing auxiliaries.
* Printing- Methods of Printing.
UNIT-IV

* Thickening agents
* Pre and post treatment (preparation and finishing of fabric) of dyed and printed goods.
* Defects of dyed and printing goods.

References:

1. Individuality in Clothing selection- Mary Kefgan.
3. Textiles by Hollen Saddler- Macmillian publishing company , New York
4. Understanding Textiles by PS Tortora-Prentice Hall Inc., New Jersey

TEXTILE DESIGN (PRACTICAL)

3 Hrs/Wk. M. Marks: 50
Int. Ass: 05
Paper: 45

Instructions for paper setters:-

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and the Sessional work will be of 05 marks each ( 10 marks)

a. Tools and equipments
   • Pens
   • Pencils
   • Brushes
   • Inks
b. Introduction to Elements of Design.
   • Lines and forms- geometrical, naturalized, stylized, traditional and abstract motifs.
   • Colour- Colour wheel, value scale, intensity scale, colour harmonies and colour ways.
c. Design Development:
   • Development of design using principles of design.
   • Different placement of design all over, central, corner, border
d. Design portfolio
   Thematic designing for:-
   • Children
   • Men
   • Women
   • Household articles.
e. Dyeing and Printing techniques
   • Tie and Dye
   • Batik
- Stencil
- Screen
- Block

References:
1. Illustrating fashion by Kathryn Mckelvey & Janine Munslow-
6. New Fashion Illustrations by Ritu.
8. The crafts of weavers; the costumes and textiles of India-Brij Bhushan, Jamila D B Taraporevalla sons & Comp. Pvt. Ltd. Bombay
CHILDREN’S CLOTHING (THEORY)

2 Hrs/Wk.  M.Marks: 50
Int. Ass:  05
Paper:     45

Instructions for the paper setter:

1. Each theory paper will be of three hours duration.
2. Questions paper will have four sections.
3. A total of Nine questions comprising of two questions from each unit and one compulsory questions 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:

To impart knowledge about the –
  1. equipments used in garment construction
  2. correct body measurements
  3. clothing requirements of infants & children

UNIT-I

1. Equipments and supplies used in clothing construction and their use and care with special reference to serving machine and its accessories.
   * Tools used:-
     Measuring tools
     Marking tools
     Cutting tools
     Sewing tools
     Finishing tools
   * Common sewing defects and their remedies.

UNIT-II

2. Methods of taking body measurements.
   -Preparation of fabric for clothing construction.
   -Layouts and estimation of fabric for different garments.

3. Terminology
   -Grain, bias, selvedge, seams, tucks, pleats, gathers, smocking, shirring, checks, plaids, trimmings.
   - Frills, flounces and bows.
UNIT-III

4. Requirements for Children Clothes.
   - Comfort
   - Safety
   - Self help
   - Room for growth
   - Appearance
   - Easy care
   - Fabrics
   - Colours
   - Economy

UNIT-IV

5. Clothing for children (different age groups) with special reference to fabrics, colours and details
   - Infants
   - Babies & Toddlers
   - Pre-school children
   - Elementary school children

References:

2. Reader’s Digest: Complete book of sewing
CHILDREN’S CLOTHING (PRACTICAL)

3 Hrs/ Wk.         M. Marks: 75
Int. Ass:    10
Paper:       65

Instructions for paper setters:-

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and the Sessional work will be of 05 marks each (10 marks)

Content:

1. Sewing machine- Parts, care and use.
2. Drafting of Child’s panty, bloomer and jhabla
3. Drafting of Child’s bodice block and sleeve block
4. Adaptation of basic sleeve to
   a) Puff sleeve and its variations
   b) Cap sleeve and its variations
   c) Petal sleeve
   d) Bell sleeve
   e) Magyar and Kimono
5. Drafting / Adaptation of collars
   a) Baby collar
   b) Peterpan collar and its variation
   c) Cape collar
   d) Sailor’s collar
   e) Bushirt collar
6. Construction of samples
   a) Basting- even, uneven, diagonal
   b) Hemming-visible, invisible
   c) Seams- Plain seams, Plain seams with top stitching, French seam, run and fell, counter seam.
   d) Seam finishes- blanket stitch, over lock, pinking, overcasting
   e) Finishing of neck lines- facing & bindings
   f) Yokes
   g) Plackets (One piece and two piece), Patch pocket, fasteners
7. Construction of following garments
   a) Baby layette- Bib, diaper, jhabla
   b) Panty and bloomer
   c) Frocks- A line, yoke frock
   d) Romper

References:

2. Metric pattern cutting for Children’s-Winifred Aldrich
3. Mc Call’s Sewing in colour-- London, Hamlyn, 1972
FASHION MERCHANDISING (THEORY)

2 Hrs/Wk.        M. Marks: 50
Int. Ass:   05
Paper:    45

Instructions for the paper setter:

1. Each theory paper will be of three hours duration.
2. Questions paper will have four sections.
3. A total of Nine questions comprising of two questions from each unit and one compulsory questions 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:

To create awareness about-
1. Fashion concepts
2. Fashion creation and manufacture
3. Merchandizing of fashion
4. Fashion stores

UNIT-I

   a) Fashion terminology- Fashion, fad, style, classic, taste, design, hi-fashion, mass.
   b) Components of fashion-line, colour, texture and form
   c) Fashion cycle and broken fashion cycle
   d) Theories of fashion adoption factors affecting fashion movement

UNIT-II

2. Fashion creation and manufacture.
   a) Fashion forecast
   b) Sources of inspiration
   c) Fashion supplies
   d) Organization of an apparel firm

UNIT-III

3. Merchandising of Fashion
   a) Definition of fashion merchandising and visual merchandising
   b) Promotion of fashion
      (i) Advertising (ii) Publicity and fashion shows.
UNIT-IV

4. Fashion distribution
   b) Department stores.
   c) Specialty stores.
   d) Chain stores
   e) Mill showrooms
   f) Factory outlets.
   g) Catalogue retail stores
   h) Discount stores
   i) Designer’s retail stores
   j) Franchise retail store
   k) Boutiques

References:

1. Fashion Merchandising- An Introduction by Elaine Stone
4. Fashion merchandising by Troxel and Judele
B.Sc. Home Science Part-II

APPAREL DESIGN (THEORY)

3 Hrs/Wk. M. Marks: 75
Int. Ass: 10
Paper: 65

Instructions for the paper setter:

1. Each theory paper will be of **three hours** duration.
2. Questions paper will have **four** sections.
3. A total of **Nine** questions comprising of two questions from each unit and one compulsory questions 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:

To impart knowledge about the-

1. Apparel terminology.
2. Elements & principles of design
3. Terminology and methods of pattern making.
4. Pattern making and designing by computers.

UNIT-I

1. Apparel Terminology.
   a) Foundations- Bustier, bra corset, bikini
   b) Coats- A line, overcoat, Cardigan, Tent coat.
   c) Jackets: Nehru, Blouson, Bolero, Blazer, Spencer
   d) Jumpers-Shift, tunic, Jumpsuit, Pinafore.
   e) Skirts:-
      - Length: Micromini, Mini, Knee length, Midi (Mid calf), Ballerina, Ankle length.
      - Other types: Godets, Pleated, Gathered, Tiered, Divided, Wrap
   f) Pants-Capri, Cargo, Baggy, Bloomers, Harem, Pedal pushers
   g) Slips-Chemise, Tunic, Camisole
   h) Waistlines and style lines- Princess line, Empire, Low waist, High Waist, Clinched, Natural waist.
   i) CAD & CAM

UNIT-II

2. Origin of Clothing
3. Elements and Principles of Design
4. Types of Design (i) Structural (ii) Decorative.
5. Factors affecting apparel designing age, sex, physical characteristics, geographical and environmental.
UNIT-III

6. Apparel design through pattern making-flat pattern and draping.
7. Terminology used in pattern making- Pattern drafting, flat pattern making, template, working pattern, production pattern, design specification sheet, pattern chart, cost sheet, trueing and blending, style number and pattern size.

UNIT-IV

9. Important national and international fashion centers.

References:

2. Dress- By Gawne.
5. Fashion Merchandising- By Stone
6. Fashion Merchandising- By Troxell and Judelle.

APPAREL DESIGN (PRACTICAL)

3 Hrs/ Wk. M. Marks: 75
Int. Ass: 10
Paper: 65

Instruction for paper setters:-

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and the Sessional work will be of 05 marks each (10marks).

Objectives:

1. To enable students to illustrate features of apparel designing.
2. To gain knowledge of figure sketching drawing human figures, illustration techniques of various colour schemes.
Content:

1. Depicting various fashion details: necklines, collars, sleeves, silhouettes, trousers, skirts, frills, bows, pockets.
2. Depicting folds, pleats, tucks, gathers, frills and laces.
3. Drawing and fleshing of croque.
4. Different movements and poses of fashion figure.
5. Thematic Apparel designing for:
   a. Children wear
   b. Ladies wear
   c. Men’s wear
   d. Sports wear

6. Designing of jewellery and accessories.

References:
1. Patrick John Ireland- Fashion Design drawing & Presentation, N.D. Om , 2005
PHYSICAL EDUCATION

3 hrs./week Marks- 50

Chapter – 1

Athletics: - What is difference between athletic and athletic,. Brief knowledge of the track and field events.
Middle Distance Running: 800 mtr and 1500 mtr race
   a.) Technique for start, finishing and running in race.
   b.) Fouls at start, finishing and running in race

Chapter- 2

Jumps, Long Jump or High Jumps
   a.) Dimension of the long jump or high jump pit
   b.) Technique
   c.) Foul of jumps

Chapter – 3

Anyone playing for the following games;
   a.) Volley ball
   b.) Badminton
   c.) Kho- Kho
   d.) Lawn Tennis

Chapter- 4

Yoga- Any three asans from the following:-
   a.) Dhanurasan
   b.) Chakrasan
   c.) Mayur asan
   d.) Sarvang asan
   e.) Bhujang asan
   f.) Tad asan

REFERENCES:-
1. Textbook of Physical Education and sports by Vishwas Publishers
2. Rule book of Athletics by Amateur Athletics Federation of India
3. Rule book of Badminton by Amateur Athletics Federation of India
4. Rule book of Volley by Amateur Athletics Federation of India
5. Rule book of Lawn Tennis by Amateur Athletics Federation of India
7. Yoga and assans by Swami Ramdev

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B.Sc. Home Science Part-II

DANCE (PRACTICAL)

KATHAK

1. TEEN TAL
   Amad - 1
   Tora - 1
   Chakkardar tora -1
   Paran -1
   Chakkar dar paran -1
   Kavit-1

2. Chautal
   tatkar in single & dugun layakari’s
   Amad - 1
   Tora - 1
   Paran -1
   Kavit-1

3. 2 Gatnikas in Teental

4. Practical demonstration of 10 Asamyukta hasta and 10 samyukta hasta

Music (Vocal)

B.Sc Home Science part – II (Practical)

Marks 50

1. One Vilambit and three fast khayals with alap and tans of the following ragas: Bhimpalasi, Bhairav, Bihag.

2. Sargam geet in Raag Bhimpalasi

3. The following talas with ekgun & dugun with bols on hands : kaharwa, roopak, tilwara

4. Five alankars are to sing in bilawal and bhairav thhat.
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<td>3 World Costumes</td>
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<td>7 Personal Empowerment &amp; Entrepreneurship Management</td>
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APPAREL CONSTRUCTION (Theory)

Teaching Periods: 3Hrs/week  
Total marks: 75
Paper Time- 3 Hrs.  
Paper: 65
Int. Ass: 10

Objectives:
To impart knowledge about-
• Various terms related to Pattern Making & Apparel construction.
• Pattern development.
• Fitting problems.

Instructions for the 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 questions 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.

UNIT-I

1. Terminology used in Pattern making: Pattern drafting, template, working pattern, production pattern, design specification sheet, pattern chart, cost-sheet, dart, dart legs, dart intake, trueing and blending, plumb line, vertical lines, horizontal lines, perpendicular lines, symmetric and asymmetric lines, style number, pattern size.
   Pivotal point & style reading
2. Pattern making tools.

UNIT-II

3. Terminology of sleeves, collars, skirts & trousers.

UNIT-III

4. Fitting- principles of good fit, various fitting problems and its remedies.
5. Handling special fabrics.

UNIT-IV

6. Methods of Pattern Development
   • Drafting
   • Flat Pattern Method, Slash and Spread, Pivot Method
   • Basics of Commercial paper pattern
   • Pattern Envelope
   • Pattern Marking
   • Pattern Layout
References:
- Allyne B. Flat Pattern Design. McGraw Hill Pub, USA

APPAREL CONSTRUCTION (Practical)

Teaching Periods: 2 hrs/week

Total Marks: 50
Paper : 45
Int. Ass: 05

Objectives:
To learn- Drafting of different basic block
- Dart manipulation.
- Construction techniques of various garments

Instructions for paper setters:-
1. Each practical paper will be of 3 hours duration.
2. The file work and the sessional work will be of 05 marks each (10 marks).

CONTENT

1) Drafting of adult’s bodice block and sleeve block.
2) Dart manipulation- single dart, princess line and yokes.
3) Drafting of basic adult’s skirt block
4) Drafting and construction of
   • Petticoat
   • Blouse
   • Nighty with yoke
   • Kameez –Salwar/ Churidaar

References:
- Allyne B. Flat Pattern Design. McGraw Hill Pub, USA
B.Sc. Home Science Part-III

2. FABRIC CONSTRUCTION (Theory)

Teaching Periods: 3 hrs/week          Total marks- 75
                 Paper:          65
                 Int. Ass.       10
                 Time: 3 Hrs.

Objectives:-
To impart knowledge about-
• Fabric manufacturing and fabric properties.
• Fabric structures and to analyze them.

Instructions for the 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 questions 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.

UNIT-1

1. WEAVING
   a) Basic terminology and basic concept.
   b) Looms.
   c) Parts of looms and their functions.
   d) Types of looms.
      - Shuttle looms- pit and table
      - Introduction to shuttle less looms.

UNIT-II

2. WEAVES
   Types of weaves
   a) Simple- Plain, twill and satin.
   b) Novelty weaves: - clipped or unclipped spot weave, swivel weave, lappet weave, Jacquard, dobbý, pile, leno weave.

UNIT-III

3. KNITTING
   a) Definition and basic terminology.
   b) Weft knitting
   c) Warp knitting
   d) Knitting machines and machine needles.
UNIT-IV

4. NON-WOVEN METHODS OF FABRIC CONSTRUCTION
   a) Felting
   b) Bonding
   c) Needle punched.

References:

FABRIC CONSTRUCTION (Practical)

Teaching Periods: 2 hrs/week                         Total marks:  50
                  Paper:  45
                  Int. Ass:  05

Objectives: -
   • To identify various weaves.
   • To acquire skills for various fabric construction techniques.

Instructions for paper setters: -
   1. Each practical paper will be of 3 hours duration.
   2. The file work and the sessional work will be of 05 marks each (10 marks).

CONTENT

1. Making samples of various basic weaves on looms.
2. Making samples by hand knitting and machine knitting.
3. Making samples of various knots using Macramé.
4. Making samples of Crochet.

ASSIGNMENT-
   • Making an article of Macramé and Crochet.
   • Collection of samples of various weaves and their graphical representation
   • Visit to weaving and knitting industry.

References:
B.Sc. Home Science Part-III

WORLD COSTUMES (Theory)

Teaching Periods: 3hrs/wk. Total marks: 75
Paper: 65
Int. Ass: 10

Objectives:
• To study the World Costumes and Ancient Indian costumes of different eras.
• Introduction of World Civilization with special emphasis on costumes and accessories.

Instruction for paper setters:
1. Each theory paper will be of 3 hours duration.
2. Question paper will have 4 sections.
3. Total of 9 questions comprising of 2 questions from each unit including one compulsory question of short answer type covering the whole syllabus will be set.
4. All question carry equal marks unless specified.
5. Students will be expected to attempt 1 question from each unit and the compulsory question.

UNIT-I

A) Study of traditional costumes of India during following periods.
1) Indus valley civilization.
2) Indo –Aryans and Vedic age.
3) Mauryan and Sunga period
4) Satvahana period.

UNIT-II

5) Kushan period.
6) Gupta period.
7) Mughal period.
8) British period.

UNIT-III

B) Study of World costumes during following periods.
1) Egypt
2) Greece
3) Rome
4) Byzantine.

UNIT-IV

5) French Costumes-middle ages.
6) Renaissance
7) French revolution.
8) Romantic period.

References:
Kumar, R. Costumes and Textiles of Royal India. Christie’s book Ltd, London
B.Sc. Home Science Part-III
WORLD COSTUMES (Practical)

Teaching Periods: 2 Hrs/wk.  Total marks: 50
Paper: 45
Int. Ass: 05

Objectives:
1. To create awareness about motifs and costumes of different civilizations.
2. To design contemporary costumes by taking inspiration from the costumes of different civilizations.

Instructions for paper setters:
1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and the sessional work will be of 5 marks each (10 marks).

Content

A) Textile Designing.
   1) Collection of motifs of different civilizations.
   2) Designing of household textiles using these motifs.
B) Costume Designing
   1) Illustration of costumes of different civilizations.
   2) Designing of contemporary costumes taking inspiration from Ancient Indian and World Costumes.
C) Portfolio making and presentation.

References:
B.Sc. Home Science Part-III

COMMERCIAL CLOTHING (Practical)

Teaching Periods: 5hrs./week  Total Marks: 150
Paper: 50  Int. Ass.: 15
Exhibition: 50  Order work: 35

Objectives:
To impart knowledge about-
- Draping technique
- Grading technique
- Commercial paper pattern
- Designing and construction of different garments in different sizes

Instructions for paper setters:
1. Each practical paper will be of 3 hours duration.
2. Paper will be set from Topic I, II and III for 50 marks.
3. Exhibition and order work will be of 50 and 35 marks respectively.

CONTENT
1. Draping – Basic bodice block (Front & Back)
2. Grading
   - Child’s bodice block
   - Sleeve block
   - Basic skirt
3. Commercial Paper Pattern
   - Casual Frock (4-5 yrs.)
   - Skirt and Top
4. Designing and Construction of the following garments:
   - Casual Frock
   - Skirt and Top
5. Exhibition - Exhibition of the sessional work of 2nd yr. and 3rd yr. will be put up.
6. Order work- Five garments will be constructed on order.

NOTE: Exhibition and Order work will be evaluated by the external examiner.

References:
- Gioello. & Berke. Figure type & size range. Fairchild publishers New York.
- Martin,S. Grading. Batsford publisher UK.
- Jacob,T.A. The Art of Sewing. UBS Publisher distribution Ltd, New Delhi.
B.Sc. Home Science Part-III

COMPUTER AIDED DESIGNING (Practical)

Teaching Periods: 5 Hrs/week
Total Marks: 150
Paper: 135
Int. Ass.: 15

Objectives:
To impart knowledge about
- Basic computer
- Paint
- Corel draw
- Adobe Photoshop

Instructions for paper setter:
1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and the sessional work will be of 10 marks and 20 marks respectively.

CONTENT

1. MS POWERPOINT
   - Detailed study of all menu options.
   - Presentation on any topic related to course work.

2. PAINT
   - Detailed study of tools.
   - Create nursery, geometrical and floral motifs.

3. CORAL DRAW
   - Detailed study of tools and menu options.
   - Create front profile of female figure.
   - Design a one-piece dress along with accessories.

4. PHOTOSHOP
   - Detailed study of tools and menu options.
   - Create compositions of prints in various colours, placements and textures.

References:
- Corel Draw X4 in simple steps- Dream tech press.
- Rajaraman, V. Fundamentals of Computer.
B.Sc. Home Science Part-III
TRENDS IN APPAREL AND TEXTILE DESIGN (Practical)

Teaching Periods: 5hrs/week              Total Marks:       75
                                                                    External Evaluation:  65
                                                                    Int.Ass:                  10

➢ Presentation of the latest trends in the following:
  • Different types of textures/ fabrics.
  • Colours
  • Trimmings
  • Silhouette
  • Fashion / Styles
  • Surface ornamentation
  • Accessories

➢ Project – Developing design and product of latest trends in textiles and apparel (one each).

NOTE: 1. All the topics should cover the latest trends in apparel and furnishings.
   2. No question paper will be set and the presentations will be evaluated by external examiner.
B.Sc. Home Science Part-III
(Common to all Six streams)
Personal Empowerment and Entrepreneurship Management

**Theory**

Total Marks : 75
Paper: 65
Internal Assessment: 10

Teaching Periods – 3 hrs/ week

Instructions for Paper Setter:

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 Section and one compulsory questions 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 Section and the compulsory question.

**OBJECTIVES:**

1. To orient the students to the concept, need and process of entrepreneurship.
2. To understand the market, types of business, the parameters for selecting and running an enterprise successfully.
3. To make students aware of the different opportunities for employment and business in Human Development and Family Relations.
4. To orient the students to the significance of programme design with focus on planning, implementation and evaluation.

**CONTENTS**

**Section-A**

**PERSONAL EMPOWERMENT**

a) The challenge – understanding and managing oneself.

b) Factors affecting Personality Development, Peer Pressure – Issues and management

c) Conflicts and stresses – Simple coping strategies

**Section-B**

**PERSONAL GROWTH AND PERSONALITY DEVELOPMENT**

a) Women and Development, Women’s organization and collective strength.
b) Capacity building for women – Education, Decision making abilities and opportunities, awareness and information on legal and political issues.

c) Gender Issues: Inequities and discriminations, biases and stereotypes: myths and facts, Aids – Awareness and Education.

Section-C

ENTREPRENEURSHIP MANAGEMENT

a) Entrepreneurship: Concept and Theories, Need and Importance of entrepreneurship development in India.

b) Entrepreneurial Traits and Types.

c) Women Entrepreneur: Characteristics, Role, Demand and Challenges.

Section–D

ENTERPRISE PLANNING AND EXECUTION


b) Four P’s of marketing, A brief introduction to Quality control and Quality assurance.

c) Feed back, monitoring and evaluation, SWOT analysis.

RECOMMENDED READINGS

10. Shefskeg L.E., 1994, Journal of Entrepreneurship ‘Entrepreneurs are not made born’
    Mc Graw – Hill Inc.

11. The CII Entrepreneur’s Hand Book.


   **Personal Empowerment and Entrepreneurship Management**

   **Practical**

   Total Marks:   50
   Paper :       45

   **Teaching Period – 3 hrs/ week**  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.
   3. The file work and viva voice will be of 5 marks each (Total = 10 marks)

   **Objectives:**

   1. To develop human competencies for Entrepreneurship.
   2. To develop skills in Program management.
   3. To analyze the issue and problems of a specific community for need assessment.
   4. To develop skills in the use of participatory approaches in program planning and evaluation.

   **Contents**

   1. Case study and analysis of one women headed micro enterprise/ small scale enterprise.
   3. Portfolio on legislation, governing small scale enterprise, NGO.
   4. Steps to organize and manage any one of the following:
      A. Open Nursery school/Day care center for the children.
         (B.Sc. Child Development)
      B. Window and interior store display. (B.Sc. Apparel and Textiles)
      C. Catering management (B.Sc. Hospitality)
      D. Interior design (B.Sc. Interior Design).
      E. Establishing Cafeteria/ Diet clinic (B.Sc. Dietetics)

   **Note--- B.Sc. (Composite) students can opt for any one of the above.**

   5. Planning, Organization, implementation and evaluation of a need base extension program for the selected community in relation to anyone.
      • Literacy
      • Income Generation
      • Social Evils.
      • Health
      • Maternal and Child care

**********