

**B. Sc. HOME SCIENCE**  
**Semester V**

Sr. No.	Subject	Theory	IA	Total Marks	C R E D	I T S
1	Diet Therapy (PaperI)	50	25	75	Th 2	Pra 1
2	Dynamics of Marriage & Family (PaperII)	50	25	75	2	1
3	Apparel Pattern Design (PaperIII)	50	25	75	2	1
4	Advanced Resource Management PaperIV)	50	25	75	2	1
5	Extension Programme Planning (PaperV)	50	25	75	2	1
6	Household Biology (PaperVI)	50	25	75	2	1
7	Applied Chemistry (Paper-VII)	50	25	75	2	1
	Total	350	175	525	14	7

**Pract=Practical, IA= Internal Assessment. Th=Theory**

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**B.Sc.HOME-SCIENCE**  
**Semester VI**

Sr. No.	Subject	Theory	Pract+IA	Total Marks	C R E D	I T S
1	Nutrition & Dietetics (PaperI)	50	15+10	75	Th 2	Pra 1
2	Developmental Assessment & Children with special Needs(PaperII)	50	15+10	75	2	1
3	Fashion Design(PaperIII)	50	15+10	75	2	1
4	Advanced Resource Management(PapaerIV)	50	15+10	75	2	1
5	Extension Training Management (PaperV)	50	15+10	75	2	1
6	Health Sciences/ Nutritional Biochemistry (Paper-VI)	50	15+10	75	2	1
7	Applied Chemistry (PaperVII)	50	15+10	75	2	1
	Total	350	175	525	14	7

**Pract=Practical, IA= Internal Assessment. Th=Theory**

SEMESTER V  
**B.Sc. HOME SCIENCE -**  
**Semester – V**  
**Food Science & Nutrition**  
**DIET THERAPY**  
**Paper -I**

**Total Marks – 75**  
Theory - 50  
Practical -15  
Internal Assessment-10

**OBJECTIVES:**

- 1) To provide knowledge about the causes and symptoms of various diseases.
- 2) To understand the role of diet in the management of these conditions.
- 3) To plan, calculate and prepare diets for various diseases.

**Theory**

**Unit – I**

Introduction to diet therapy:

1. Applications of principles of diet therapy a) diet counseling b) Dietetic care in hospital patients: its importance.
2. Therapeutic adaptations of the Normal Diet : a) Soft diet b) liquid diet c) Bland diet d) Low fiber diet
3. Modes of feeding: a) Enteral b) Parenteral and Psychological factors involved in feeding.

**Unit – II**

Causes, Symptoms and Principles of Dietary Management of Gastro-intestinal disorders/ Liver disorders:

1. Gastro intestinal disorders : a) Peptic Ulcer b) Ulcerative Colitis c) Diarrhea and Constipation
2. Liver disorders: a) Viral Hepatitis b) Cirrhosis c) Hepatic Coma.
3. Gall Bladder Disorder L: Cholecystitis and cholelithiasis

**Unit – III**

Weight Management:

1. Causes, Symptoms and Principles of Dietary Management of obesity and overweight
  - I. Obesity and overweight.
    - a) Types and causes of obesity
    - b) Criteria for obesity and overweight
    - c) Dietary management of obesity : i) Fats in diet, ii) Types of diet iii) Desirable rate of loss of weight

- d) Role of exercise
  - e) Effects of untreated obesity
2. Underweight a) Definition and problems associated.

## **Unit – IV**

Causes, Symptoms and Principles of Dietary Management of Diabetes Mellitus:

- 1) a) Normal Blood Glucose level. Types of Diabetes Mellitus b) Treatment: Oral Hypoglycemic drugs and insulin. C) Role of diet in the management of IDDM and NIDDM.
- 2) Food Exchange list : Its use in diet plan
- 3) Food Allergy : Common food allergens

## **Practicals**

- 1. Preparation and Evaluation and Preparation for the following disorders
  - 1) Liquid diets 2) Soft diet 3) Bland diet
- 2. Planning, Calculation and Preparation for the following disorder:
  - 1) Gastrointestinal Disorders : Peptic Ulcer, Diarrhoea, Constipation
  - 2) Liver Disorders : Jaundice : Mild to Moderate
  - 3) Weight Management : Obesity, Underweight
  - 4) Metabolic Disorder : Diabetes (NIDDM)

## **Internal Assessment**

Anyone of the following

- 1) Report on visit to a health club 2) Project 3) Survey

## **Books Recommended:**

- 1. Nutritive value of Indian foods: Gopalan C, Rama Sastri and Balasubramainiam, S.C.National Institute of Nutrition, 2007.
- 2. Krause's Food Nutrition and Diet therapy: L Kathleen Mahan, Sylvia Escatistump 19<sup>th</sup> edition, W.B.Saunders Co. 1996.
- 3. Normal & Therapeutic Nutrition: Corinne H Robinson & M.R. Lawer 15<sup>th</sup> Edition 1997.
- 4. Clinical Dietetics : F.P.Antia, 2<sup>nd</sup> Edition Oxford University Press 1973
- 5. Text book of Human Nutrition: Editors: Bamji M.S.Rao N.P.Reddy V.Oxford & IBH Pub co. Pvt ltd.2009.
- 6. Dietetics : Srilaxmi B 3<sup>rd</sup> Edition, New Age International (P) Ltd 2009
- 7. Manual of Nutrition and Diet Therapy : Grills and Bosscher, Macmillan Public co inc. 1981.
- 8. Essentials of Nutrition and Diet Therapy: Willams S.R. Times Mirror I Mosby college Pub.
- 9. Nutrition & Dietetics : Shubhangi A Joshi Tata Mcgraw- Hill education Pvt.Ltd, New Dehli 2010.

## Home Science Syllabus

### Semester-V

## HUMAN DEVELOPMENT

### [Dynamics of Marriage & Family]

#### Paper-II

<b>Total Marks</b>	-	<b>75</b>
Theory	-	50
Practical	-	15
Sessional	-	10

#### Objectives:

- To make students aware of marriage and family.
- To make students aware of changes and problems of old age.

#### Unit-I: Adulthood

- **Early Adulthood**  
Characteristics, Developmental tasks, Interests, Social mobility,  
Adjustment to - Sex role, Vocation, New Family parenthood.
- **Middle Age**  
Characteristics, Developmental Tasks, Adjustment to Physical Changes  
(appearance, sensory abilities, physiological functioning, health &  
menopausal syndrome), vocation & changed family pattern.

#### Unit-II: Marriage

Concept, Definition, Philosophy, Functions, Readiness for Marriage, Selecting a partner, Premarital Counselling, Marital Adjustment – factors influencing and areas. Conflicts & its causes Divorce – its effects.

#### Unit-III: Family

Definition, family as an social institution, characteristics, functions, fa----- life cycle – stages, roles & relationships, types of families, family tension, crises in fly life.

## **Unit-IV: Old age**

Concepts, Characteristics, Developmental tasks Adjustment to physical changes, Motor abilities, Mental abilities, Interests & retirement , Problems, Homes for the aged.

### **Practicals**

- i) Visit to home for the aged.
- ii) Study of problems of the aged.
- iii) Study of interests of the young adults
- iv) Interviewing families of different background for understanding changing functions of families.
- v) Group discussion on need for preparation for marriage.  
Record to be maintained.

**Sessional:** To study various marriage customs in India.

### **Books Recommended**

Marriage and Family                      Landis and Landis, 2<sup>nd</sup> Edition, 1953,  
building a successful marriage      Prentice Hall Inc. Englewood Cliffs N. J.

- 1) Marriage                                      Robert V. Blood.
- 2) Exploring Marriage                      David Knox  
and the Family

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

## **SEMESTER – V**

### **TEXTILES**

#### **APPAREL PATTERN DESIGN**

##### **PAPER-III**

Total Marks	– 75
Theory	- 50
Internal Assesment	- 25

### **Objectives :**

To apply the knowledge of Body measurements, pattern making and grading.

### **UNIT-I**

- Body measurements – Importance - Preparing for measuring - measurements for ladies, mens, boys & girls.
- Standardizing body measurements – Importance - techniques used.
- Pattern envelop- Pattern envelop front & back instruction sheet

### **UNIT-II**

- Pattern making – methods (Drafting & Draping), merits & Demerits,
- Types of paper patterns, principles of pattern Drafting – Drafting basic bodice front, back & Sleeve Draping – steps in draping a basic bodice front, back & sleeve
- Flat pattern method .

### **UNIT-III**

- Different type of darts ,Relocation of dart by slash &spread and pivot method
- Fitting-principles of fitting, standards for a good fit, Step in fitting techniques.
- Checking fit of a garment, ,Different fitting problems & how to remedy them.

### **UNIT-IV**

- Pattern layout – Definition – Rules in layout, methods of layout, layouts for lengthwise stripped designs, bold designs asymmetric designs, one way designs, Alternative techniques if cloth is insufficient, fabric cutting, transferring pattern markings.
- Pattern alteration – importance of altering patterns, principles for pattern alteration, common pattern alterations in a blouse.
- Brief study of pattern grading – Definition – methods of Grading

## **Internal Assessment**

- Test fit of different patterns on dress form.
- Preparation of basic blocks – children, men & women.
- Developing patterns through-
- Dart manipulation – single dart, multiple dart,
- Princess lines
- Yokes
- Fullness (gather, pleats & tucks),
- Contouring pattern (wrap, off shoulder, halter ,cowl).
- Draping of basic bodice block-Front and Back
- Draping of Top with Halter
- Draping of top with princess line
- Draping of Top with off shoulder design
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## **References :**

- Jaffe Hilde and Relis Nurie, “Draping for Fashion Design”, Prentice Hall
- Crawford Amaden, “The Art of Fashion Draping”, Fairchild Publishers
- Goulbourn Margatha “Introducing Pattern Cutting, Grading and Modelling”, Batsford Pub. UK.
- Shoben Martin, “Grading”, Batsford Pub. UK.
- Price Jeanne and Zamkoff Bernard”, Grading techniques for Modern Design”, Fairchild Pub.
- Helen Joseph- Armstrong “Pattern making for Fashion Design”

**B.Sc. (Home Science)**  
**Semester V**  
**Resource Management**  
**(Advanced Resource Management)**  
**Paper – IV**

Theory – Periods / Week (Credit -2)	Total Marks - 75
Practical – Periods / Week (Credit -1)	Theory - 50
	Practical - 25

**Objectives :-**

- 1) To recognize the importance of wise use of resources in order to reach personal and family goals.
- 2) To make students realize the importance of motivating factors in management – values, goals and standards.
- 3) To give opportunity to develop ability to take rational decisions.

**COURSE CONTENT : Theory**

**UNIT I : Family Resources**

- 1) Resources : a) Definition b) Role of resources c) Scope of resources  
d) Classification – 1) Human Resource: i) Time ii) Energy iii) Interest iv) Ability or skill  
v) Knowledge vi) Attitude
- 2) Non-human – i) Money ii) Material goods iii) Community facilities
- 2) Characteristics of resources
- 3) Factors affecting family resource.

**UNIT II : Motivating factors of Human Life:**

- 1) Values : a) Definition b) Importance  
c) Classification – i) Intrinsic ii) Instrumental iii) Human needs values
- 2) Goals: a) Definition b) Importance of goal setting c) Classification –Mean- end  
d) Short term e) Intermediate f) Long term
- 3) Standards:a) Definition b) Importance  
c) Classification- i) Conventional ii) Flexible iii) Qualitative iv) Quantitative

**UNIT III : The Management Process**

- a) Definition & Importance
- b) Planning – i) Importance & need for planning  
ii) Types :- 1) Use- Single, Repeat 2) General, Specific



- 3) Levels – i) Master planning ii) Operational Planning iii) Day to day planning
- 4) Sequencing & Ordering
- c) Implementation- i)Controlling/ Executive of plan  
ii) Energizing- checking the progress  
iii) Adjusting the plan
- d) Evaluative feed back – i) Importance  
ii) Types- 1) Formal 2) Informal 3) Self  
iii) Methods of evaluation
- e) Inter -relatedness between planning, controlling & evaluation

**UNIT IV : Decision Making –**

- a) Definition
- b) Role and scope of decision making
- c) Process of decision making
- d) Types- i) Individual ii) Group iii) Habitual Iv) Intellectual

**COURSE CONTENT: Practical**

Total Marks – 15

- 1) Diagramatic Representation of the following:
  - a) Family Resources
  - b) Decision Making
  - c) Management Process
  - d) Inter-relatedness of values, goals and standards.

**COURSE CONTENT: Internal Assessment(any two)**

Marks-10

- a) Visit to exhibition / Trade show – Report
- b) Giving seminars on related topics
- c) Bags / Purses / Greeting cards
- d) Assignment on related topics

**Books Recommended:**

1. Good year & Klohar ‘Managing for effective living’ John Wiley and Sons.
2. Gross-crandall-knoll ‘Management for Modern families’ Prentice Hall, Inc. New Jersey.
3. Nickell- Rice- Tucker, ‘Management in family living’ John Wiley & Sons.
4. Swanson Bettye ‘Introduction to Home Management McMillan Pub. House. Inc. New York.
5. Borkar Sunita ‘ Introduction to Resource Management’, Himalaya Publishing House.
6. Sounderaraj Stella ‘A textbook of Household Arts’ Orient longman.

**SEMESTER V**  
**EXTENSION EDUCATION**  
**EXTENSION PROGRAMME PLANNING**  
**Paper-V**

THEORY : - 50  
PRACTICALS : - 25

## **OBJECTIVES;**

- 1.To understand the process of programme planning & its importance in extension work.
2. To develop an understanding of social survey.
3. To develop understanding regarding community organization.
4. To understand the role of extension workers in development work.

## **UNIT I**

Programme Planning Process: Definition, importance, Professional abilities needed by programme planners, Principles of programme planning process, Steps of programme planning process, Precautions used in programme planning process.

## **UNIT II**

Social survey: Meaning of social survey, importance of social survey, types of social survey, Variation between social survey and social research. Tools of data collection-Questionnaire, observation, interview, and schedule.

## **UNIT III**

Community Organization: Meaning and concept of community organization, Importance, objectives, principles, methods of community organization in extension work.

## **UNIT IV**

Extension worker: Meaning, Role of extension worker in the field of development, essential qualities needed by extension worker, role of subject matter specialists in extension work.

## **Practicals:**

1. Practice of public speaking to develop leadership ability among the learners.
2. Presentation of seminar on home science extension aspect and submission of report.
3. To learn the method of arranging non projected materials in the form of extension exhibition.

Internal assessment:

Planning of two day extension programme on any home science aspect.

## **References:**

- 1.Bajpai, S.R. Methods of social survey and Research, Kitab ghar ,Meston Road, Kanpur.

2.Sethi,N.,Rani,S. et.al. Extension and communication management, Agrotech publishing Academy, Udaipur.

3.Gupta D.D.Extension Education,core contents and emerging areas ,Agrobias(India),Jodhpur.

## **Household Biology**

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### **Paper VI**

#### **Unit I :-**

Horticulture :- Layout of kitchen garden , its parts , importance and cultivation of Brinjal , Cabbage, Cauliflower and Tomato .

Floriculture :- Layout of Ornamental garden, its parts importance and cultivation of Marigold.

Nursery Development:- Its importance , preparation of soil, methods of plant propagation such as Budding, Grafting and Layering, common diseases and pest in garden plants and their control.

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

Poultry Science:- Management for meat and eggs. Diseases :- symptoms, causes and remedies of Ranikhet, Bumble foot and cholera.

Dairy Science :- Management of Milk Breeds- Jersey , Murrah , Nagpuri.

Mushroom :- Introduction to Mushrooms , Types suitable for cultivation , preparation and culture of Spawns. Cultivation of Oyster Mushroom , White Button Mushroom and Paddy Straw Mushroom as a small scale industry.

#### **Unit III :-**

Sericulture :- Introduction to Sericulture, study of different silkworms - **Bombyx mori** , **Eri silkworm** , **Tassar silkworm** with reference to their life cycle , host plants and common diseases .

Apiculture:- Introduction to Apiculture, study of different Honey Bees - **Apis mellifera** , **Apis indica**, **Apis dorsata**, **Apis florea** with reference to their life cycle and Bee keeping - traditional and modern, Economic importance of Bee keeping.

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

Fertilizers:-

Vermicompost:- Food habits of Earth worm and its uses in vermicompost ,its cost and economic importance.

Organic Manure:- Chemical composition.

Chemical fertilizers:- Advantages and Disadvantages of Chemical fertilizers.

**Practicals Max. marks 25**

**Min. marks 13**

Practical = 10 marks

Record Book = 05

Project and Visit = 10

Spotting - 05

Garden operation - 03

Viva-voce - 02

1. Study and identification of Garden Implements and accessories.
2. Methods of propagation (Garden operation) - Grafting , budding and layering.
- 3 Study and identification of vegetables , local flowers and their seeds.
- 4 Visit to Garden - Ornamental and Kitchen .
- 5 Visit to Poultry Farm to observe different breeds, housing and feeding
- 6 Visit to Cattle Farm.
  
- 7 Project :-  
Preparation of garden - Ornamental or Kitchen Garden.

Cultivation of Edible Mushroom .  
Study of Common diseases of vegetables and their control.

**References / Books Recommended -**

1. Poultry Production - Dr. R. A. Singh
2. Poultry Production - Dr.S.S.Burkule
3. Dairy Production - Dr. Anilkumar Kulkarni
4. Aadhunik Go-sanverdhan - D. V. R. Thatte
5. Dairy Production - Dr. Prabhakar A. Deware
6. Mushrooms for Livelihood - Dr. Vijaya Khader
7. Mushroom Part 2 - Dr. Asha Mane
8. Plant Propagation - M. K. Sadhu
9. Text Book of Entomology - Dr. D. B. Tembhare

# Applied Chemistry

## Paper VII

Theory : 2 Periods /Wk/(Credits    Practical : 2 Periods/Wk/(Credits    )

Theory Marks :- 50

Practical Marks:- 25

### Unit-I

Oil and Fats : Definition, structures of oil and fats, difference between oil and fats, saponification value and Iodine value, rancidity of fat, hydrogenation of oil, purification (refining) of oil.

Fatty acids : Naturally occurring saturated and unsaturated Fatty acids ( names and molecular formulae). Omega Fatty acids, MUFA, PUFA and Omega-3PUFA.

### Unit-II

Soap : Definition and classification, different types of soaps, cleansing action of soap, manufacturing process of soap.

Detergent : Definition and classification, difference between soap and detergent, general ingredients present in detergents, formulation of detergents.

### Unit – III

Aromatic Compounds : definition, structure of Benzene, positions in benzene ring.

(a) Benzene – preparation and properties ( nitration, sulphonation, halogenation and alkylation)

(b) Phenol : laboratory preparation from cumene, chemical properties (salt formation, condensation with formaldehyde and phthalic anhydride) and uses.

### Unit – IV

Polymerisation : definition of polymerisation, addition polymerization (polythene, PVC) condensation polymerization ( Nylon-66, Polyester)

#### Practicals:

1. Identification of organic compounds ( Acetic acid, Urea, Phenol, salicylic acid)
2. Preparation of liquid detergents.
3. Preparation of solid detergent.
4. Preparation of soap.

#### Books Recommended

1. Text book of organic chemistry - Bahl and Tuli
2. Text Book of Engineering Chemistry - S.Chand Co. Dara,
3. Text book of Basic Applied chemistry - P.C.Jain and Monica Jain
4. Text Book of Applied Chemistry - T. Jacob
5. New Cosmetic Science - Mitsul
6. Perfumes, Cosmetics, Soap, Vol. I, II, III Poucher
7. Chemistry and manufacturing of Cosmetic Vol. I, II, III Navarge