

B.Sc. Home Science
University of Allahabad
IIIrd Year

Paper No.	Papers	Theory	Practical	Total
I	Food Microbiology	75	50	125
II	Apparel Design and Construction	75	50	125
III	Food Science and Community Nutrition	75	50	125
IV	Family Resource Management	75	50	125
V	Project/ Seminar	100	-	100
	Total Marks	400	200	600

Paper I: Food Microbiology

1. History account and classification of microbes. Study of microbiology and environment, study of microbiology and community
2. General study of prokaryocyte, yeast, moulds and fungi
3. Distribution of micro-organisms in the air, water, soil, milk, fruits and vegetables etc.
4. Importance of micro- organisms in the home
5. Microscope and its usage
6. Bacteria, general characteristic, morphology, biochemical characteristic, pathogens, gram (-) ve and gram (+) ve. Common bacterial diseases chemotherapy
7. Role of bacteria in: a) soil fertility b) foods and c) milk and milk products
8. Common antibiotics
9. Bacteria phases. Genetic variation and mutation in bacteria
10. Study of infection in bacteria
11. Immunological principles, antigens, antibodies and types of immunity
12. Protozoa and fungi associated diseases
13. Growth of microorganisms, nutrition, growth factors, microbial culture, continuous culture and affecting factors
14. Virus structure, composition, classification, viral infections and associated diseases
15. Food poisoning and food infection
16. Microorganism in fermentation and decay

Curtailed Syllabus (Theory):

1. Genetic variation and mutation in bacteria

2. Protozoa and associated diseases

3. Growth of microorganisms, nutrition, growth factors, microbial culture, continuous culture and affecting factors.

4. Microorganism in fermentation and decay

Practical

1. Autoclaving and sterilization techniques sterilization of solid and liquid materials.
Media, reagents and apparatus of lab
2. Preparation of culture media preparation of solid, semi solid and liquid media
3. Inoculation techniques for microbiological cultures planting slant streaking
4. Effect of temperature and pH on bacterial growth
5. Staining of microorganisms: simple and differential
6. Culture and identification of fungi
7. Relation of free oxygen to microbial growth
8. Lethal action of ultraviolet light
9. Biochemical reactions, starch hydrolysis and fermentation by bacteria
10. Quantitative method of plating: number of bacteria from soil, water, milk etc.

Curtailed Syllabus (Practical):

1. Effect of temperature and pH on bacterial growth
2. Culture and identification of fungi
3. Relation of free oxygen to microbial growth

Paper II: Apparel Design and Construction

1. The History and Psychology of Dress:

- a. Design: Types of design
- b. Structural and decorative

2. Principles of Design: Harmony, emphasis, dominance, proportion, balance, rhythm

3. Elements of Design:

- a. Line: Types, their effect and function in selection for figure types.
- b. Texture: Types, selection, according to figure, complexion, climate, occasion and fashion
- c. Fashion- Style, sources, fashion cycle

4. Theories of Fashion: The trickle down and trickle across theory.

5. Fitting: Principles of fitting- common fitting problems and how to remedy these problems

6. Techniques in Pattern Making: Flat pattern making, draping

Curtailed syllabus (Theory):

- 1. Colour:** Colour harmonies, colour combinations, importance of colour in apparel, colour forecasting.
- 2. Principles and application of pattern making in clothing.**

Practical

1. Drafting, cutting and stitching of five different types of collars and five different types of sleeves.
2. Basic bodice block and variations in yoke designs
3. Drafting cutting and stitching of frock- two years old, romper. Umbrella cut skirt, salwar, kurta, chudidar, night-wear, sari-blouse (skin fitting garment)

Curtailed syllabus (Practical)

- 1. Samples of different seams, embellishments, value enrichment through variation in stitch**

Paper III: Food Science and Community Nutrition

1. Food Science:

- a. Definition and scope of food science
- b. Relationship of food science with food chemistry, food microbiology, food processing
- c. Composition, structure, nutritive contribution, quality and preparation of: (i) cereals, (ii) pulses, (iii) fruits, (iv) vegetables, (v) milk and milk products, (vi) meat, fish and poultry, (vii) eggs, (viii) fats, oils and oil seeds,

2. Food Preparation:

- a. Food terminology
- b. Methods
- c. Effects of heats on food constituents: chemical. Physiochemical and microbiological
- d. Nutrients in food: sources and food groups

3. Controlling Techniques:

- a. Weight
- b. Measures
- c. Basic recipes
- d. Product evaluation

4. Methods of Improving Nutritional Quality of Foods:

- a. Germination and fermentation
- b. Supplementation and fortification

5. Food Preservation:

- a. Causes of food spoilage
- b. Principle of preservation
- c. Methods (household and commercial)

6. Consumer: Protection laws and its implication.

7. The Community:

- a. Concept of community
- b. Structure of rural and urban community
- c. Concept of community nutrition and its scope
- d. Inter relationship between community members.

8. Nutritional Problem of the Community:

- a. Infancy
- b. Adolescents
- c. Pregnant and lactating mothers
- d. Old age
- e. Problems arising from food habits of population group due to geographical and economical difference

9. Food Adulteration:

- a. Meaning of food adulteration and food laws
- b. Common food adulteration and unhealthy food hazards
- c. Agencies checking food adulteration

10. Nutritional Programme in India:

Role of nutritional agencies, national, international, and voluntary agencies, role of kitchen garden, dairy, fisheries in improving the nutritional status of people

Curtailed syllabus (Theory):

1. Food Science:

C. (ix) tea, coffee, cocoa, chocolates, (x) condiments and spices, herbs and (xi) leavening agents

11. Food Additives:

- a. Definition
- b. Additives
- c. HACCP- its role in the food industry

12. Factors Affecting Food Availability and Intake:

Agricultural production, population, economic, social, education, distribution, religious and industrialization

13. Food Storage:

- a. Methods of storage of food grains
- b. Agents causing losses of food grains and preservation
- c. Fumigation of grains

14. Nutrition Education:

- a. Meaning of nutrition education and its importance
- b. Organization of nutrition education programme for the community
- c. Problems counter in organizing a programme and their remedies
- d. Evaluation and follow up

Practical

1. Experimental cookery Low cost recipe
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Curtailed syllabus (Practical)

2. Planning and executing nutritional education programme at a rural centre
3. Community service

Paper IV: Family Resource Management

1. Household Equipment and Family Finance:

- a. Mechanical Appliances: Vacuum cleaner, washing machine
- b. Heating Appliances: Temperature control in house hold equipment- iron, toaster, refrigerator
- c. Motorized Equipment: mixers, grinders, blenders

2. Family Income Types: Money income, real income and psychic income

3. Income Groups in Indian Society:

- a. Low income group
- b. Middle income group
- c. Higher income group
- d. Factor effecting expenditure-size, composition, family value, social status, location of family

4. Money Management:

- a. Planning: budgets, advantages, distribution, utilization of income
- b. Control: Maintaining records of expenditure chronological and item-wise

5. Saving and Investment

- a. Need for saving security, bulk expenditure pre-planned, unforeseen expenditure
- b. Principles of investing in savings
- c. Selection of saving agencies
- d. Institution, safety liquidity and return
- e. Types of institutions and facilities

6. Bank: Types of accounts, post office accounts, life insurance, unit trust, shares, bonds, fix deposit certificates and e-banking

7. Tax: Goods and Service Tax (GST)

Curtailed syllabus (Theory)

- a. Gas meter, cream separator, food processor
- b. gas, electric oven, air-conditioners, microwave cooking, water heater
- c. Fan
- d. Per capita income and average house hold income groups

Practical

Theme based room arrangement for sick room, drawing room arrangements for each profession- working women, army, navy, professor, and doctor

1. Birthday party arrangement
2. Dining room settings and table laying
3. Table manners

Paper V: Project/Seminar