

## HOME SCIENCE (864)

### Aims:

1. To develop an understanding of the terms, concepts and principles used in the study of the discipline of Home Science.
2. To develop thought, inquiry, insight and understanding of issues involved in running a home, providing adequate nutrition, meal planning, care of textiles and clothing, budgeting and family care.
3. To inculcate an appreciation of aesthetic balance, economy and efficiency with regard to home.
4. To foster an understanding of the changes that take place during growth and development of children.
5. To equip adolescents with the knowledge and skills necessary for management of the self.
6. To foster an understanding of children in difficult circumstances, problems of the elderly and individuals with special needs.

## CLASS XII

There will be two papers in the subject:

**Paper I: Theory:** 3 hours ... 70 Marks

**Paper II: Practical:** ... 20 Marks

▪ Planning Session: 1 hour

▪ Examination Session: 3 hours

Project Work ... 7 marks

Practical File ... 3 marks

### PAPER I -THEORY

There will be one paper of 3 hours duration divided into 2 parts.

**Part I (20 marks)** (Compulsory) will consist of short answer questions covering the entire syllabus.

**Part II (50 marks)** will consist of **eight** questions, which will require detailed answers. Candidates will be required to answer **five** out of **eight** questions.

#### 1. Food Preparation

(i) Techniques and methods of cooking. Medium of cooking, (dry and wet methods of cooking), choice of method of cooking and quality of food. New developments in cooking:

- Microwave
- Technologies that do not harm the environment such as, solar cooking, biogas, air fryers.

*Techniques and Methods of cooking; Principles of Cooking; reasons for cooking food. Medium of cooking (dry and wet methods of cooking); classification of cooking methods; new developments in cooking: microwave, solar cooking, bio gas and airfryers.*

(ii) Preliminary treatment of foods before cooking.

*Common pre-cooking procedures e.g. (a) cleaning/washing; (b) peeling; (c) cutting (d) pounding; (e) grinding; (f) beating/whipping; (g) soaking; (h) mixing; (i) kneading; (j) grating.*

(iii) Effects of cooking on food components. Carbohydrates – starch, sugar, pectin, cellulose; Proteins; Oils and Fats; Minerals

and Vitamins. Internal and external changes in food components.

(iv) Methods of increasing nutritive value of foods: Sprouting/germination, fermentation, parboiling, combination of foods, supplementation, substitution, puffing and liming.

*Methods of increasing nutritive value of foods: sprouting/ germination, fermentation, parboiling, combination of foods, supplementation, substitution, puffing and liming. Do's and don'ts in cooking to minimize loss of nutrients.*

#### 2. Management of Agricultural Produce – Storage and Preservation

(i) Causes for spoilage of food.

*Factors contributing to food spoilage: Enzymatic action, moisture, microbial contamination, insects, rodents and improper handling of food and its spoilage due to poor storage facilities. Importance of food preservation and principles of food preservation.*

(ii) Storage of foods – perishable, semi-perishable and non-perishable foods.

*A general idea of storing common foods at home.*

(iii) Simple methods of food preservation.

*Simple household methods of food preservation: (a) Bactericidal Methods; (b) Bacteriostatic Methods; (c) Dehydration; (d) Refrigeration; (e) Chemical Preservation (i.e. salting, use of sugar, use of lime, vinegar and chemical preservatives); (f) Use of Oil and Spices; (g) Sterilization by cooking.*

#### 3. Meal Planning for the family

(i) Objectives of meal planning. Nutritional adequacy, food groups.

*Self-explanatory.*

(ii) Factors affecting food selection: Age, occupation, gender, physiological conditions, personal likes and dislikes, tradition, seasonal

availability, economic considerations, religious beliefs, family size and composition.

*An understanding of how food consumption varies from one family to another; how food selected by families is affected by various factors like age, occupation, gender, physiological conditions, personal likes and dislikes, tradition, seasonal availability, economic considerations, religious beliefs, family size and composition.*

- (iii) Meal planning for various age groups. Nutritional needs of preschool children, school-age children and adolescents.

*An understanding of the nutritional needs of pre-school children, school-age children and adolescents. Making meal plans for these age groups based on their nutritional requirements and RDA.*

*Eating disorders: an understanding of the following: (a) Anorexia nervosa (b) Bulimia (c) Binge eating disorder or obesity; ways to control the above eating disorders.*

*Developing good food habits - importance of breakfast, following regular meal patterns, avoiding junk food and skipping of meals; Food fads – meaning and examples.*

*Special diets-What is a special diet? Factors to be kept in mind while preparing special diets for: fever, diarrhea, diabetes, obesity, hypertension and constipation. A day's menu plan for each of the above.*

#### **4. Resource Management**

- (i) Safety in the home.

*Prevention of falls, fire, electrocution, poisoning, suffocation and choking, child proofing the home, special safety measures for the elderly.*

*Safety and sanitation in the kitchen: hygiene and disposal of household waste (organic and inorganic). Common safety measures at home at the time of natural calamities like earthquake, storm, floods.*

- (ii) Food adulteration.

*Definition of food adulteration as stated in PFA, when is food considered adulterated; what is quality?*

*Health hazards due to intentional adulteration; metal contaminants; bacterial and fungal contaminants; pest and pesticide residue.*

*Common adulterants present in food stores – stones, dust, dirt, argemone oil, metanil yellow, kesari dal, toxic colours, chicory powder and starch and their effects.*

*Prevention of Food Adulteration Act (PFA).*

#### **5. Consumer protection**

Standard marks available for providing consumer protection.

Creating awareness about standard marks for consumer protection - FPO, Agmark, ISI, Woolmark, Ecomark; Vegetarian and Non-vegetarian food; need for understanding care labels on garments and fabrics; Study of nutritive value, weight, use of additives, preservatives, manufacturing and expiry date /best before dates on labels of packaged goods.

*Role of advertisements and their impact.*

*Problems faced by consumers; importance of consumer education; rights and responsibilities of the consumer; advantages of consumer education.*

*Creating awareness about standard marks for consumer protection - FPO, Agmark, ISI, Woolmark, Ecomark: importance and features of each; standard marks for, vegetarian and non-vegetarian foods; need to understand care labels on garments and fabrics; Study of nutritive value, weight, use of additives, preservatives, manufacturing and expiry date /best before dates on labels of packaged goods.*

#### **6. Human Development**

- (i) Physical development during adolescence.

*Physical Development during puberty and adolescence: role of the endocrine system - changes in bodily proportions and their effects, early and late maturers; Hygiene needs during adolescence. Influence of sports and exercise on physical fitness.*

- (ii) Cognitive development and language.

*Stages of cognitive development; changes in adolescents due to cognitive development. Language and communication skills among adolescents - development of language;*

*influences on language development; development of ways in which adolescents obtain information, remember it and utilize it for problem solving and reasoning.*

(iii) Social and emotional development.

*Socio-cultural influences on the adolescents – teenagers are influenced by social relationships in the family, neighbourhood, community, country and the world. The family and socialization – patterns of parenting, parental control techniques; role of siblings and grandparents. Development of peer relationships and friendship patterns. Development of gender roles and stereotypes. Role of school and teachers on the social and emotional development of the teenager. Preparation for career.*

*Problems of adolescents: peer pressure, substance abuse (meaning, symptoms and treatment).*

(iv) Perspectives on Adult Development: Meaning of adulthood.

*Transition to adulthood and accepting related responsibilities; dimensions of adulthood; issues of increasing life expectancy; sensitizing students to the needs and care of the elderly; modifications in life styles and diet with age, preparation for retirement, empty nest syndrome.*

## 7. Textiles and Clothing

Selection of clothes – factors affecting selection.

Methods of laundering - Wet and dry cleaning.

Storage of clothes – wool, silk and cotton.

*Factors affecting selection of clothes; Laundering - laundry equipment.*

*Methods of laundering - wet cleaning of cotton, linen, wool and silk; different methods employed; steps in wet laundering; difference in techniques. Dry cleaning - purpose of dry cleaning; dry cleaning agents; precautions to be observed during dry cleaning; advantages and disadvantages of dry cleaning.*

*Storage of clothes - wool, silk, cotton, special clothes like zari sarees, lace, velvet.*

*Removal of basic stains - turmeric, oil, ghee, milk, perspiration, coffee or tea, grease, perfume, lipstick, egg.*

## PAPER II PRACTICAL – 20 Marks

This practical paper will consist of **two** sessions:

(i) The Planning Session (1 hour)

(ii) The Examination Session (3 hours).

**(i) The Planning Session:** Candidates will be required to plan a **balanced menu** during the Planning Session, on **one** occasion from the two given options.

**(ii) The Examination Session:** Candidates will be required to cook any two dishes from the menu planned during the Planning Session (showing different methods of cooking).

Candidates would also need to display the dishes prepared.

In addition to the above, candidates will be required to make a flower arrangement/ floor decoration.

**NOTE: Candidates will be required to exhibit different methods of cooking during the practical examination.**

**The Practical Work will be evaluated by a Visiting Examiner appointed locally and approved by the Council.**

### Distribution of Marks

Menu Planning – 5 Marks

Cooking – 10 Marks

Display (Table setting/picnic hamper/ packed food basket) – 3 Marks

Flower arrangement/floor decoration – 2 Marks

**Candidates will be required to complete the Practicals listed below during the year:**

Plan a **balanced menu** for the following, keeping in mind the variations (age/sex) given in the question:

- Party to celebrate any special occasion
- Picnic
- Journey (short journey/ overnight journey)
- Festival

Prepare any **two** dishes from the planned menu, using different methods of cooking.

Make an appropriate display to complement the prepared dishes.

Make a suitable flower arrangement/floor decoration

## **PROJECT WORK AND PRACTICAL FILE –**

**10 Marks**

### **Project Work – 7 Marks**

**Evaluation Criteria: material, content, presentation and innovation**

The project work is to be assessed by a Visiting Examiner appointed locally and approved by the Council.

The candidate is to creatively execute **ONE** project/assignment on an aspect of Home Science. Teachers may assign or students may choose any **one** project of their choice. Students can choose any other project besides the ones indicated in the list below. Following is only a suggestive list of projects.

1. Market survey of packaged goods such as, foodstuffs (biscuits, jams, chips, cheese spread), hair dyes, shampoos, soaps, etc. to investigate whether consumer protection norms of labeling are being followed.

2. Draw a case history of a family/individual by talking to elders, referring to diaries and seeing the photographs. Focus on factors responsible for change or development of an ability or characteristic.
3. Market survey on readymade garments in relation to care labels, material, seasonal availability, size, age, occasion, etc.
4. Survey on practices followed in the region for storage, preservation and processing of perishable or non-perishable farm products and to assess the extent of wastage due to faulty practices.

### **Practical File – 3 Marks**

The Visiting Examiner is required to assess candidates on the basis of the Practical file maintained by them during the academic year.