

## CMRF

**Subject: Home Science**

**CODE: S08**

### **UNIT-I : FOOD SCIENCE AND FOOD SERVICE MANAGEMENT**

- Food science and nutrition.
- Properties of food – physical and chemical properties
- Quality evaluation of foods- objectives and subjective.
- Effects of cooking and processing techniques on nutritional components and other physical parameters, food preservation and application.
- Food pigments and additives.
- Food standards, microbiological safety of food, HACCP, food packaging.
- Perspectives of food service-menu planning, food cost analysis.
- New product development - nano technology
- Food service management of institutional level-hospital, educational institutions, social and special institutions
- Research methods-fundamental issues, concept, need relevance, scope and ethics in research

### **NUTRITION AND DIETETICS**

- Food groups – balanced diet, food pyramid, macro and micro nutrition.
- Nutrients-role of nutrients in the body, nutrient deficiencies and requirements for Indians.
- Public health nutrition
- Nutrition through life span-physiological changes, growth and development from conception to adolescence, nutritional needs and dietary guidelines for adequate nutrition through life cycle, nutrition concerns.
- Community nutrition, sports nutrition, nutrition in emergencies and disasters.
- Nutritional assessment-methods and techniques.
- Nutritional intervention-national nutrition policies and programme, food and nutrition security.
- Clinical and therapeutic nutrition.
- Diet counseling and management.
- Research methods- research designs, principles and purpose of research

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

- Textile terminologies- fibre, yarn, weave, fabric etc., classification of fibers, yarns and weaves, Identification of fibers and weaves.
- Manufacturing process of major natural and manmade fibres, properties and their end uses.
- Different methods of fabric construction-woven, knitted and non woven fabrics, their properties and end uses.

- Textiles finishes-classification, processing and purposes of finishes.
- Dyeing and printing-classification, method of block printing, tie and dye, batik, roller printing, screen printing, discharge, heat transfer printing and digitized printing.
- Traditional textiles of India-embroidered textiles, printed textiles, woven textiles, dyed textiles of various regions in India. Identification on the basis of fibre content, technique, motif, colour and designed.
- Textile Testing and quality control-need of testing, sampling method, techniques of testing fibres, yarn, fabrics and garments. Testing of colourfastness, shrinkage, pilling and GSM of fabrics.
- Textile and environment-banned dyes, eco-friendly textiles, contamination and effluent treatment, Eco-label and eco marks.
- Recent developments in textiles and apparels- nano textiles, technical textiles, occupational clothing, zero waste designing, up cycling and recycling.
- Research methods-types of research, descriptive, survey, historical, qualitative, quantitative, analytical and action research

## APPAREL DESIGNING

- Body measurements-procedure, need, figure types and anthropometry.
- Equipments and tools used for manufacturing garments-advancements and attachments used for sewing machine. Types of machines used and their parts.
- Elements and principles of design and its application to apparel. Illustrations and parts of garments.
- Fashion-Terminologies, fashion cycle, fashion theories, fashion adoption, fashion forecasting and factors affecting fashion.
- Pattern making-drafting, draping and flat pattern making techniques, pattern alteration and dart manipulation techniques.
- Apparel manufacturing-terminology used, seams, techniques and machines used, process of fabric to apparel manufacture.
- Apparel Quality testing-Quality standards and specification, Quality parameters and defects of fabrics and garments.
- Care and maintenance of clothing-principles of washing, laundry agents, storage techniques case labels and symbols.
- Selection of clothing for different age groups. Selection of fabrics for different and uses.
- Research methods-hypothesis testing, types and scope

## UNIT- III: RESOURCE MANAGEMENT AND CONSUMER ISSUES

- Management-concept, approaches, management of time, energy, money, space, motivating factors, motivation theories, decision making.
- Functions of management-planning, supervision, controlling, organizing, evaluation, family life cycle-stages, availability and use of resources.
- Resources-classification, characteristics, factors affecting use, resource conservation, time management, work simplification techniques, classes of change, fatigue and its

management.

- Management of natural resources-land, forest, water, air, water harvesting, municipal solid waste management, concept of sustainable development, SDGs.
- Money management-family income, types, supplementation, budgeting, household accounts, family savings and investment, tax implications.
- Human resource management- functions, need, human resource development-challenges, functions, manpower planning, training need assessment, training methodologies, training evaluation.
- Consumer-definition, role, rights and responsibilities, consumer behavior, consumer problems, education and empowerment.
- Consumer protection- consumer organization, cooperatives, alternative redressal, standardization, standard marks, quality control, buying aids, consumer legislation.
- Entrepreneurship-concept, process, barriers, entrepreneurial motivation, challenges, enterprise setting, project planning and appraisal, enterprise management.
- Research methods-sampling techniques, types of sampling, sampling procedures, probability and non probability sampling

## **HOUSING AND INTERIOR DESIGN**

- Design fundamentals – elements of art, principles of design, principles of composition.
- Colour - dimensions of colour, psychological effects of colour, colour schemes, factors affecting use of colour.
- Space planning and design-housing need and important, principles of planning spaces, types of house plans, economy in construction, planning for different income groups.
- Building regulations-norms and standards, zoning, housing for special groups and areas, housing finance.
- Housing and environment- building materials- impact on environment, green rating systems, energy efficiency in buildings, energy auditing, indices of indoor comfort.
- Energy as a resource- conventional and non- conventional sources, renewable /non-renewable energy, energy management, national efforts on energy conservation.
- Product design - design thinking process, diffusion and innovation, design communication, ergonomic considerations.
- Ergonomics - significance, scope, anthropometry, man, machine, environment relationship, factors affecting physiological cost of work, body mechanics, functional design of work place, time and motion study, energy studies.
- Furniture and furnishing - historical perspectives, architectural styles, contemporary trends, wall finishes, window and window treatments.
- Research methods-selection and preparation of tools for data collection- questionnaire, interview, observation, measuring scales, ranking and measurement, reliability and validity of tools

## **UNIT-IV: CHILD/HUMAN DEVELOPMENT**

- Principles of growth and development, care during pregnancy and prenatal and neonatal development.
- Theories of human development and behavior.
- Early childhood care and education – activities to promote holistic development.
- Influence of family, peers, school, community and culture on personality

development.

- Children and persons with special needs, care and support, special education, prevention of disabilities, rehabilitation.
- Children at risk-child labour, street children, children of destitute, orphans, child abuse and trafficking.
- Adolescence and youth: changes, challenges and programs to promote optimal development.
- Adulthood, characteristics, changing roles and responsibilities in early and middle adulthood.
- Aging-physical and psychological changes and care needs.
- Research methods-types of variables and their selection.

## **FAMILY STUDIES**

- Dynamics of marriage and family relationships.
- Family welfare-approaches, programmes and challenges, role in national development.
- Domestic violence, marital disharmony, conflict, resolution of conflict.
- Parent education, positive parenting, community education.
- Family disorganization, single parent families.
- Family studies-family in crisis, family therapy, initiatives for child development.
- Human rights, rights of children, rights of women, status of women, gender roles.
- Guidance and counseling- across life span and for care givers.
- Health and well being across life span development.
- Research methods- data collection and classification, coding, tabulation, inferential and descriptive statistics.

## **UNIT- V: COMMUNICATION FOR DEVELOPMENT**

- Basics of communication- nature, characteristics, functions, process, models, elements, principles, barriers, perception, persuasion and empathy, types of communication, levels (settings) of communication transactions, process of listening.
- Communication systems and communication theories- human interaction theories, mass communication theories, message design theories, communication systems, culture and communication.
- Concept of development- theories, models, measurement and indicators of development.
- Concept of development- communication models and approaches, diffusion and innovation, mass media, social marketing.
- Role of communication in development- need and importance, development journalism, writing for development-print, radio, television and internet.
- Concerns of development communication- gender, health, environment, sustainability, human rights, population, literacy, rural and tribal development.
- Advocacy and behavior change communication- concept, theories, models, approaches, application and challenges.
- Traditional, modern and new media for development - folk forms of songs, art, dance, theatre, puppetry, advertisement, cinema, ICTs for development-community radio, participatory video, social media and mobile phones.

- Organisation/agencies/institutes working for development communication-international/national/state and local.
- Research methods-analysis of data through parametric and non parametric tests.

## **EXTENSION MANAGEMENT AND COMMUNITY DEVELOPMENT**

- Historical perspectives of extension—genesis of extension education and extension systems in India and other countries, objectives of extension education and extension service, philosophy and principles of extension programme development.
- Programme management- need assessment, situation analysis, planning, organization, implementation, monitoring and evaluation.
- Extension methods and materials- interpersonal, small and large group methods, audiovisual aids-need, importance, planning, classification, preparation and field testing, use and evaluation of audio-visual materials.
- Curriculum development and planning for extension education and development activities, Bloom's taxonomy of educational objectives and learning.
- Non-Formal, adult and lifelong education-historical perspectives, concept, theories, approaches, scope, methods and materials used, challenges of implementation and evaluation, issues to be addressed.
- Training, skill development and capacity building for human resource development-methods of training, entrepreneurship development.
- Community development- perspectives, approaches, community organization, leadership, support structures for community development, Panchayati raj institutions, NGOs and community based organisations.
- People's participation and stakeholders' perspectives, Participatory Learning and Action-methods and techniques.
- Development programmes in India for urban, rural and tribal population groups-programmes for nutrition, health, education, wage and self employment, women's development, skill development, sanitation and infrastructure.
- Research methods-scientific report writing, presentation of data, interpretation and discussion.