

DETAILED SYLLABUS FOR THE POST OF ASSISTANT PROFESSOR IN HOME SCIENCE (KERALA COLLEGIATE EDUCATION)

(Cat.No. : 397/2022)

(Total Marks – 100)

MODULE I: INTRODUCTION TO NUTRITION SCIENCE (10 MARKS)

ENERGY: Human energy components, energy balance, energy determination, EER. **CARBOHYDRATES:** Structure, classification, Properties, digestion, absorption and metabolism, deficiency, toxicity; EAR, Dietary fibre -nutritional importance. **PROTEINS:** Structure, classification, Properties, digestion, absorption and metabolism, nitrogen balance, deficiency, toxicity, EAR, dietary protein quality, Hormones, enzymes **LIPID:** Structure, classification and properties, digestion, absorption and metabolism, deficiency, toxicity, EAR, lipo tropic factors, lipoproteins, role of essential fatty acids. **VITAMINS AND MINERALS:** Classification, physiological action, transport, absorption, storage, deficiency diseases and toxicity, EAR, antioxidants, isotopes

MODULE II: EXTENSION EDUCATION & DEVELOPMENT PROGRAMES

(10 MARKS)

EXTENSION: CONCEPT AND METHODS OF EXTENSION -Extension: concept, goals, philosophy, history and scope. Types of Extension and approaches to Extension. Principles of Extension. Relationship between Communication and Extension - Role of Extension in Development. Methods of community contact in Extension - classification, characteristics and selection. Significance of Community organisations, Self-Help Groups and Youth clubs in Extension. Non formal and Adult and Continuing Education- Concept and practice. Diffusion of innovation and adoption - concept, theory and application. **CONCEPT OF DEVELOPMENT-** Measuring development. Models of Development- Dominant Paradigm, Basic Needs Model. Changing Paradigms of Development, BCC Behaviour Change Communication and SBCC Social and Behaviour Change Communication. Role of Advocacy in development. **DEVELOPMENT ISSUES AND GOALS-** National and international perspectives, Sustainable Development Goals. Contemporary National Development programmes (related to education, employment, income, health and nutrition, digitalization, and women). **GENDER AND DEVELOPMENT** - Conceptual analysis of development - Theoretical perspectives of Gender and Development –WID, WAD,GAD. Gender Mainstreaming steps and techniques,

Gender Budgeting, Role of the Dept of Women and Child in improving the health of women and children, Changing trends in the fashion industry based on gender neutrality, Laws pertaining to gender rights etc.

MODULE III: INTERIOR DESIGNING AND LANDSCAPING (10 MARKS)

FUNDAMENTALS OF DESIGN: Definition and classification. Elements of design, principles of design, colour- characteristics, systems- Prangs, Munsell's Ostwald, Harmonies. **FURNITURE AND SOFT FURNISHINGS:** Definition and classification, Significance of furniture, Factors influencing selection of furniture for different purposes. Anthropometry and its significance in furniture design, Ergonomics, Soft Furnishing: Classification, Factors influencing selection of furnishing for interior space, Types of furnishings. Carpets and rugs – types, selection, laying. Window styles, Window treatments, Curtain styles. **LIGHTING AND LIGHTING ACCESSORIES.** **SPACE MANAGEMENT:** Meaning and Definition, significance of space management in interiors. **Planning and Designing Interior space:** Objectives, process, schematic diagram, Selection of site, principles of house planning, Types of plans, house plans for different income groups, Eco friendly building materials and techniques. **Drafting-** Developing new house plan, evaluating an existing plan, remodeling plans. **AUTO CAD –** Basic tools and Modifying Tools. **LANDSCAPING: Designing a landscape** for Home and Work place – Elements, principles and components. Landscape lighting, **Garden and its types, Flowering and Non-flowering. Soil and its preparation. Organic manures and fertilizers.** Hydroponic cultivation. **Interior Landscape –** Principles, techniques and components involved. **LAWNS:** Types of lawns, preparation and its maintenance.

MODULE IV: TRADITIONAL TEXTILES AND COSTUMES OF INDIA (10 MARKS)

Clothing: Origin, Traditional Hand woven Textiles of India. Brief history of printed, dyed and painted textiles of India. Colours and motifs used in printed, dyed and painted Indian traditional textiles. Traditional embroideries of India. Traditional costumes of men and women of India. Traditional Indian Sarees: Maheshwari Sarees, Kanchipuram sarees, Gadwal, Dharmavaram, Mangalagiri, Uppada, Venkatagiri, Jamdani, Banaras Brocades. **Fiber Science:** Classification of textile fibres New Fibers: types and characteristics. **Yarn Science:** Spinning and its Types, Yarn- structure classification, properties and end applications. **Fabric Science:** Weaving mechanism – functions of a simple loom ,primary, secondary and auxiliary loom mechanism, types of weaving machines and their functions. Types of weaves. **Textile Finishing:** Introduction to textile finishing, objectives, classification, Advances in textile finishing and their advantages and limitations, factors affecting textile finishing. Textile Processing –Preparatory processing - desizing, scouring, bleaching and mercerizing. Textile dyeing - Classification of dyes, dye selection based on fabrics and Stages of dyeing. **Textile Printing –** Methods of printing.

MODULE V: EARLY CHILDHOOD CARE AND EDUCATION (ECCE) AND INCLUSIVE EDUCATION (10 MARKS)

ECCE: Significance and Objectives of Early Childhood Care and Education, ECCE in new National Educational Policy (NEP). Pedagogical approaches to principles of programme planning, Types of planning. Domains of Development- Sensory, motor, language, cognitive, creative: Birth to three years, three to six years. Setting up and early year's classroom. Various curriculum models and approaches of ECCE, High Scope curriculum, Project approach, Reggio Emilia approach, Head Start Program, TeWhariki approach, Waldorf curriculum, Swedish curriculum – Goals for a modern preschool system. Implication of Theories of cognitive development- Piaget and Vygotsky in classroom; Experiential Learning Process, Confluence approach (Gardner); Stages in creativity development. Different forms of creativity. Parent involvement-helping parents cope, parental education, School readiness and developmentally appropriate activities during birth to six years, Basic principles of developmentally appropriate practices. Planning the theme based curriculum. Concept of formal, Non formal and play way methods. Play- Outdoor play, Indoor play, Music, methods of teaching creativity; Creativity and Art, Puppetry, Dramatization, Teaching aid, Storytelling techniques, Mathematics and science activities. **INCLUSIVE EDUCATION:** Introduction to children with special needs – meaning, definition, classification. Concept of special, inclusive and home based education. Mental Retardation, Visually challenged children, Speech and Hearing impaired, Gifted and creative children, Learning disabilities

MODULE VI: NGO MANAGEMENT & PROGRAM DESIGN AND EVALUATION

(10 MARKS)

ESTABLISHING NGO'S – Concept of Non- Government Organization, Laws related to its functioning, Registration Procedure for starting an NGO, and funding pattern and fund raising. Corporate social responsibility (CSR) – Definition, concepts, Approaches of CSR, SR Tools, National and International CSR activities. Corporate governance in India, Legislative measures of CSR: Corporate, Labour, stake holders, Environmental and pollution and Social Preferences: Customer, Employees, Communities, Investors. Social Accounting, Social Auditing, Corporate Social Reporting. **PROGRAMME DESIGN:** Meaning of programme planning, principles of programme building process, steps involved in programme building process, programme development cycle, indicators, outputs and outcomes. Models of extension program management-overview of models, Sandhu's model, Logic mode. Programme budgeting, marketing and strategic planning, People's participation and social mobilization in development, levels of participation. Participatory Learning and Action –concept, principles, classification of tools and techniques. Leadership in extension-functions, types of leaders and leadership styles. **MONITORING AND EVALUATIONS**–Approaches to monitoring, principles, indicators-Evaluation -meaning, purpose, elements, steps, criteria for evaluation, types of evaluation, methods of evaluation, Documentation and follow up.

MODULE VII: ADVANCED MANAGEMENT

(10 MARKS)

FUNDAMENTALS OF MANAGEMENT: Concept, Definitions. Salient features and significance, Qualities of a good manager. Levels of Management, Management skills, Managerial areas and its function, Principles of management. **Planning** - Meaning, Definitions, Characteristics, Objectives, Benefits and limitations of planning. Steps in the planning process, application of planning process to family and institution. **Decision-making**-Meaning and Role of Decision making, Types of Decisions, Techniques and tools in Decision making- Decision tree

and Cost benefit analysis. **MANAGEMENT BY OBJECTIVES (MBO)**. Meaning and definition, features, objectives, its significance, advantages and limitations. Types of MBO, Steps in MBO Process. **ORGANIZING**: Concept of organization - Structure and process, steps in designing organizational structure, Principles of organization. **DIRECTING**: Meaning and characteristic, principles and techniques of direction. **Motivation** - Meaning, nature and importance of motivation, Techniques of motivation, Motivation theories and their application. **Communication**- Nature of communication, Process of communication, **Leadership** - Concept and natures, Importance of Leadership, Leadership styles - any four. **Controlling and Evaluation** - Nature of control, Importance and limitations of control. Types of control. Need for control, steps in control process. Application to the family. Techniques of control.

MODULE VIII : RESEARCH METHODOLOGY

(10 MARKS)

OVERVIEW OF RESEARCH: Introduction to research - Meaning, objectives and significance. Types of research. Selection of research problem, Hypothesis – Meaning, significance, types of hypotheses. Variables –types and characteristics. Limitations and delimitations. **SAMPLING DESIGN**: Population and sample, Sampling design, Sampling techniques. **METHODS AND TOOLS FOR RESEARCH**: Methods-Survey, Observation, Interview, Case study, Experimental and clinical studies, Rapid assessment procedure. Tools- Questionnaire, Schedule (Interview and Observation), Case Study, Rating Scales, Attitude Scales. Reliability and validity of Research tools. **RESEARCH DESIGN**: Research design - Meaning, Significance and Features, Types of design, Pilot studies- Need and Significance. **ETHICS IN RESEARCH**: Ethics in conduct of research- Human and animal welfare concerns. **SCIENTIFIC WRITING**: Different forms of scientific writing -Articles in Journals, Research Notes, Reports, Proposals, Review articles, Monographs, Dissertations.

MODULE IX: PUBLIC HEALTH NUTRITION AND MEDICAL NUTRITION THERAPY

(10 MARKS)

ASSESSMENT OF NUTRITIONAL STATUS IN COMMUNITY SETTINGS- ABCD technique. Nutrition Intervention programmes: National Nutrition Policy, Preschool feeding programme, ICDS, MDM, SNP, WNP, ANP, BNP, NNAPP, FNB, NIDDCP, National Program for Prevention of Blindness due to Vitamin A Deficiency. **NUTRITION IN CHILDHOOD, ADOLESCENCE AND ADULTHOOD**-Nutrition and development during infancy, childhood, adolescence. Growth Monitoring, Nutritional requirements in all age groups. Common Nutritional problems in this age group. **NUTRITION IN PREGNANCY AND LACTATION**: Nutritional requirements in pregnancy and lactation, weight gain during pregnancy, Physiological cost of pregnancy and lactation, Nutritional complications of pregnancy and lactation. Effects of alcohol and smoking on foetal. RDA, Balanced diet for pregnancy and lactation. **GERIATRIC NUTRITION**- Physiological, socio-psychological, and metabolic aspects of ageing, changes in body composition, nutritional and health status of elderly, Chronic degenerative diseases–Osteoporosis, Dementia, Alzheimer’s disease, Parkinson’s disease -causes and management. **CONCEPT AND PUBLIC HEALTH ISSUES IN POPULATION**: Health care system in India. Role of public nutritionist in health care delivery. Public health issues- Non-Communicable diseases- Obesity, Cardio-vascular diseases, Diabetes, Cancer and their preventive measures Nutrient deficiencies – PEM, SAM, MAM, Anaemia, Micronutrient deficiencies. **STRATEGIES TO COMBAT PUBLIC HEALTH ISSUES IN POPULATION**: Improving food and nutrition security - Green White and Blue revolution. Nutrition education - Principles of planning. Food security, food production and food pricing. **MEDICAL**

NUTRITION THERAPY- Routine Hospital Diets, Nutritional Management In Diseases Of The Gastro Intestinal Tract, Endocrine Disorders, NCDs, Kidneys, Liver, CVD.

MODULE X: FASHION DESIGN CONCEPTS (10 MARKS)

Introduction to Fashion Design: Definition, terminologies of fashion, Fashion theories and movement, fashion cycle and fashion forecasting. **Fashion Business:** Structure and functions of fashion industry, Study of fashion business centers and fashion designers in India and abroad, Fashion brands and their unique features, fashion retailing and visual merchandising. **Fashion Communication:** Advertising and publicity for fashion promotion- creative writing, fashion photography, fashion journalism, Trade shows and fashion shows. **Fashion Design Process:** Design elements and principles of design, colour theories and harmonies, design inspiration to thematic designing. Motif development and repeats. Fashion illustration and Portfolio development. **Garment Styles:** Garment styles for various age groups and styling for individuals, fabric studies and their suitability to various apparels, fashion ornamentation and accessories.

NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper.