

**Module 2.**

- Greco-Roman and Judeo Christian foundations – Rise of Islam – Caliphate – Feudalism in Europe: Features – Debates about transition to capitalism – Christian church organizations – cultural legacies of medieval period.

Module 3.

- Rise of nation states – Voyage of exploration and discovery – Renaissance – Reformation – the new science

Module 4.

- Commercial revolution – Mercantilism – Instruments of Monetary transactions – changes in agriculture.

Module 5.

- Rise of capitalism – The Age of Reason – Enlightenment thinkers of the 18th century.

Module 6.

- Industrial and agrarian revolutions – Technological progress – Social consequences.

Module 7.

- Modern revolutions: English, American, French, Russian and Chinese.

Module 8.

- Imperialism and the struggle for colonies – scramble for Africa – the Far East, 1870-1918

Module 9.

- The first World War–League of Nations – Dictatorships in Europe.

Module 10.

- Anti colonial struggles: China, Vietnam, Africa, and Latin America – Different strategies .

Module 11.

- United Nations Organization – Post World War politics and the quest for Hegemony – Decolonization – Cold war –Dissarmament and arms control – Oil and geo politics -

Bipolar world to Unipolar world – Dominance of Finance Capital: The World Bank and the International Monetary Fund – Economic integration of Europe – North-South dialogue - Liberalization, Privatization and Globalization – BRICS – ‘Arab Spring’ – Post Cold war world.

15. Home Science

Unit I**Human Development and Family Relations****Module 1.**

- Child Development : definition, significance, scope, contemporary research., Methods of child study, Theories of child development, psychoanalytic theory, learning theory, conditioning, cognitive theory- Freud, Pavlov, Watson, Skinner, Piaget .
- Growth and development: definition, principles, stages/ life cycle, areas of development, influencing factors (heredity and environment), mile stones, developmental tasks, growth spurt, sensitive and critical periods in development.

Module 2. Human Development

- life cycle approach- period, stages, characteristics, significance, needs, care of each stage - Prenatal, natal, neonatal, infancy and babyhood, early childhood, late childhood, adolescence-(pre, early and late), youth, adulthood, middle age, elderly.

Module 3.

- Problems and hazards in each stage of life cycle- Health issues-Prenatal-genetic, maternal, congenital, birthdefects, infections
- Natal- neonatal, infancy and child hood At risk babies, LBW, premature, multiple births, child hood ailments, accidents, infections, communicable diseases, nutritional



deficiencies, Barker's hypothesis. Developmental delays, handicaps Behavioural problems,

- Issues and concerns in Adolescence.-Health issues- obesity, under weight, anaemia in girls, STD/ Reproductive health problems. Eating disorders bulimia, anorexia nervosa.
- Social issues- Substance abuse, peer pressure, bullying, sexual abuse, delinquency, truancy, anti- social behavior
- mental health issues- anxiety, depression, suicide, phobia, identity crisis, defense mechanisms, projection, regression, repression, inhibition, substitution, rationalisation, poor self concept, lack of self confidence, and motivation identity crisis, poor performance and academic achievement, insecurity, hierarchy of needs relationship with adults family and peers.
- Youth and Adulthood- life style related diseases, reproductive health problems.-infertility, PCOD., menopause related, osteoarthritis, osteoporosis, psychosomatic disorders, personality disorders,
- Problems in old age-, health problems-physical, lack of appetite, digestive problems, Arthritis poor muscular control/ co-ordination, sensory, , dementia, Alzheimers, ailments and diseases ,, lack of civic amenities- transportation, recreation, housing, retirement and related issues, poverty, economic crisis,. Psycho social- Abuse, neglect, abandonment loneliness, death and bereavement.

Module 4.

- Other Issues faced by children-Gender disparities, adverse sex ratio, female foeticide, infanticide, child poverty, child marriage, child labour, child abuse, refugee children, street children, children of migrant workers, orphan children, abandoned children, traffic children, children in conflict with law, children of prostitutes, child sex

tourism, child pornography, children in disasters (natural and man made), children in substance abuse situation.

Module 5.

- Care. Food- breast feeding, weaning, food for preschool children, growing children, adolescent, adults and old age- nutritional needs, requirements , characteristics, , types, selection, modification of foods and diets,. Good food habits, wrong habits, modern trends, foods to be avoided.
- Health care- breast feeding- exclusive, predominant, bottle feeding, artificial feeding, complementary feeding, weaning. Infant milk substitutes, breast feeding promotion network in India (BPN), (GOBIFFF), Growth monitoring ORT, breast feeding ,immunization, family welfare, family education and food supplements (GOBIFFF), BPHI Arogyakiran, RSBY, RCH – definition, components, child survival, safe motherhood, adolescent care.
- Physical and mental care- habit formation, discipline Exercise, yoga practices, play, Recreation, aerobics, - counselling, need for providing guidance to children, parents and teachers. Mental health in children- Mal adjustments at home and school , Neurotic and psychotic behavior. Stress- major stressors in life. Stress in different stages of life, areas of stress, stress management in home, school and work place.

Module 6.

- Education- Early childhood education- preschool education- significance, objectives, major contributors, types, principles, pre requisites for preschools, qualities of a good teacher.
- School going children – modern trends, learning objectives, skills, indoor and outdoor activities. Play- significance, types, values, selection of play materials.



- Adolescents-significance, coeducation, life skill development, vocational guidance and education, preparation for economic independence and emotional independence. Career clinics.sex role identification, preparation for marriage and family relationship.
- Sex education- need and importance, areas to impart sex education, approaches-deviation, STD.
- Value education- civic sense, aesthetic appreciation, creativity, role of parents, family and teachers in inculcating values, attitudes, behavior and personality in children.

Module 7.

- Differently abled children- changing terminology, definition, classification, characteristics, causes, diagnosis, detection, manifestations- psychosocial problems-physically and, sensory challenged- visually impaired, hearing impairment, speech impairment. Mental- retardation, gifted, autism, hyperactivity, learning disability, emotionally disturbed, socially maladjusted – Juvenile delinquency- truancy, antisocial elements, prevention, care and treatment,special needs, special education as per need, protection and management methods.Theraputic guidance and counseling,preparation of parents,family members teachers and friends

Module 8. Marriage & Family Relations

- Marriage- significance, definition, functions,types, areas needing adjustments -family relationship, sex, parenthood, child care, finance, work participation, employment. Marital harmony, disharmony, crisis- divorce, separation, desertion, infidelity, infertility, mental illness.
- Family- definition, significance, types- family size, functions, roles of members-Traditional, modern and changing. Problems and crisis- illness, single parenthood, women headed family, family disintegration, children with problems. Parenthood-

responsibility, preparation, child caring and rearing practices, types, attitudes, methods, parental influence on children's behavior, value, attitude, outlook and personality,socialization in various family contexts in different cultures, population education.

Module 9. Advances & Assessment of children

- Detection- Foetal test, AGAR test, screening for abnormalities, ultra sound, amniocentesis, chronic villus sampling, test tube screening, stem cell assessment Ponderal index., Development assessment-growth monitoring, growth chart, Trivandrum developmental screening chart (TDSC), Eliz health path for adolescents and adults (EHP) protection- , cognitive test, Draw a man test, projective techniques-rorschach's ink blot, role play, sentence completion,, intellectual test, attitudinal test, aptitude tests achievement intervention, child apperception test.

Module 10.

- Supporting & Welfare programmes and organisations for care, protection and prevention- UIP, ICDS, CSSM, Minimum need programme. Twenty point programme, Immunisation programmes, pulse polio campaignings, IRDP, UBSP, Adult literacy Mission, IMCI, IMPCH, Nutritional supplementation- Midday meal, supplementation nutrition programmes, special nutritional supplementation- IDD, Vitamin A prophylaxis, anaemia control programme, Folic acid programme, IMCD, ASHA workers, anganwadi workers, NRHM, NPAG.RSBYS, Arogyakiranam, Programmes for differently abled, child guidance clinicschild help line, Helpage India, free education for school students ,special programmes for girl child, and girls of socially and economically backward children, FPAI, ICCW, KSCCW, NCERT, SCERT, ECCE, IAPE, NCPCR, CLF,



Integrated programme for school children
Amma thottil, Adoption programmes,
NOAPS, National policy for older persons,
Day care centres, mobile crèches, creative
outlets
Prevention and protection through
legislation for prenatal, after birth, childhood
youth, adulthood, women, aged, Marriage,
family, inheritance. Juvenile courts, Family
courts.

Unit II

Food Science, Nutrition and Dietetics

Module 1.

- History of food science, Basic five food groups (ICMR, 2011),. Nutritive value, composition, grading, selection, storage, products,. Beverages- alcoholic and non-alcoholic- energy contribution. Therapeutic contribution of spices and condiments. Pigments in foods. Recent advances in food science-Novel proteins, fabricated foods, textured foods, convenience foods, Ready to eat foods, sugar, fat and protein substitutes, rainbow nutrition. Anti nutritional factors in foods

Module 2.

- Methods of cooking, Physical and physiochemical changes in food in relation to cookery- colloids, emulsions, stabilisers. Denaturation, gelatinization, dextrinization, rancidity. Hydrogenation, winterization, smoking. culinary roles and effect of heat on cereals, pulses, egg, meat, fish, poultry, fruits and vegetables Methods to improve nutritive value of foods- sprouting, malting, fermentation, roasting, browning, fortification, enrichment.. Transfats, Ageing, stages of sugar cookery, shortening agents, leavening agents.

Module 3.

- Post harvest technology measures adopted by government to increase food production-

Green revolution, blue revolution, white revolution, yellow revolution, brown revolution, silver revolution. Agents causing food losses- physical and Role of Save Grain Campaign and FCI in preventing food losses. Food security bill, 2011. New packaging materials.

Module 4.

- Food preservation -Methods- high temperature, low temperature, radiation, microwaves, preservation of cereals, pulses, egg, meat, fruits and vegetables. Food preservatives- natural and artificial, safe tolerance limits

Module 5.

- Food adulteration - Types, adulterants, methods to detect adulteration, health hazards of adulteration, measures to prevent adulteration- FSSAI, New initiatives by Government of Kerala for having safe food - Operation Ruchi.

Module 6.

- Food poisoning- Botulism, salmonellosis, Food spoilage by microbes, useful microbes- role of probiotics and prebiotics in health. Food fads and Fallacies. Food toxicants, Food additives, Food laws and standards, Food sanitation and quality control, nutrition labelling, misbranding, food testing laboratories.

Module 7.

- History of nutrition. Macronutrients - Carbohydrate, Protein, Fat - classification, functions, metabolism, digestion, absorption, sources, RDA, deficiency. Inborn errors of carbohydrate, protein and fat metabolism. Micronutrients-
- Vitamins- Naming of vitamins, Fat soluble vitamins- Vitamin A, D, E, K. B complex vitamins- Vitamin B₁, B₂, B₃, B₅, B₆, B₈, B₁₂, Folic acid, Biotin, Vitamin C - functions, sources, RDA, methods of assay, deficiency, toxicity, nutritional disorders and prevention.



- Minerals- calcium, phosphorus, iron.
- Trace elements - iodine, copper, zinc, selenium, cobalt, cadmium- historical background, functions, sources, deficiency, toxicity. Antioxidants, phyto chemicals.

Module 8.

- Fibre- classification, functions, sources, RDA, water in human nutrition.
- Water balance and imbalance.
- Electrolyte balance and imbalance.
- Energy balance, Total energy requirement- REE, BMR, Physical activity, SDA, Estimation of energy expenditure- calorimetry- direct and indirect. Aerobic exercises and health. Role of phytochemicals in health. Interrelationship between nutrients.

Module 9.

- Introduction to Dietetics- Registered dietitian, RDA (ICMR, 2011) for different age groups activities and socioeconomic status,. Normal diets for all age groups. Maternal and child nutrition. Food habits, eating disorders , Therapeutic & Hospital diets- Full fluid diet, clear fluid diet, soft diet. Tube feeding, Parenteral feeding. Nutrition, physical, biochemical changes and Medical nutrition therapy for febrile conditions, energy balance- obesity, underweight, PEM. Deficiency disorders, Infectious diseases, Upper gastrointestinal tract diseases- peptic ulcer, gastric surgery, lower gastrointestinal tract diseases- constipation, diarrhoea, steatorrhoea, Disease of large intestine- diverticular disease, irritable bowel syndrome. Hepato - biliary tract disease- hepatitis, cirrhosis, hepatic coma. Gall bladder and Pancreas- cholelithiasis, cholecystitis, pancreatitis. Kidney diseases- Nephritis, Nephrosis, Renal failure, Dialysis, Transplantation. Auto immune disorders, AIDS, Life style diseases- diabetes- IDDM, NIDDM, hypertension, cardiovascular

diseases. atherosclerosis, cancer. AIDS, food allergies, malabsorptive syndromes and intolerance.

Module 10.

- Paediatric Nutrition- LBW babies, premature babies- characteristics, complications, feeding pattern. Organ function test- Gastric, Liver and Kidney. Hemoglobiopathies. Assessment of nutritional status (ABCD) of adults (Direct and Indirect), infants. Subjective Global Assessment (SGA)

Unit III

Family Resources Management

Module 1.

- Introduction to Home Management- concept and scope of home management. Steps in Management process. Goals, Values, Standards. Decision making- types and process. Conflict resolution.

Module 2.

- Family Resources- meaning, basic characteristics and classification. Demands upon resources- family life cycle approach. Factors influencing resources management. Methods of utilization of resources. Management of time and energy- Significance. Time Schedule. Fatigue- types, causative factors and alleviating techniques. Management of money- Family income- types and sources. Family budget- types, steps in making budget. Engel's Law of Consumption. Financial records- types, purpose. Savings and Investments- institutions and schemes.

Module 3.

- Work simplification- meaning and techniques. Mundell's classes of changes. Basics of Time and Motion study- Pathway chart, Process chart, Operation chart. Labour saving gadgets- importance, selection, use and care. Concept of Ergonomics-



importance and application of ergonomic principles in selected areas- kitchen design, for the differently abled.

Module 4.

- Common household equipments- major and small electrical equipments and non-electrical equipments- selection, use and care. Indigenous equipments- janatha refrigerator, hay box, smokeless chulah. Hi-tech equipments- trends and possibilities.

Module 5.

- Renewable energy – meaning, sources- solar, wind, wave, geothermal, biogas. Devices- solar cooker, biogas plants. Waste- types, management techniques- domestic, institutional and community. Five R's of waste management.

Module 6.

- Housing-Principles of planning family houses, approaches to housing, low cost housing strategies, low cost building materials. Housing designs and Standards. Modular designs. Housing finance- sources, adequacy and limitations. Cost reduction techniques. Contemporary trends in housing.

Module 7.

- Home maker as a Consumer-problems, rights and responsibilities, redressal/ grievance cell and procedures. Consumer protection and pertaining laws. Consumer education. Functions of consumer forum and court. Standardisation and Labelling. Advertisement- importance, role and effect on the consumers.

Module 8.

- Interior Designing- Elements, Principles and Applications- house and apparels. Prang Colour Wheel- colour schemes, qualities of colour. Aspects of Interior decoration- furniture arrangement, soft furnishings, window decorations, accessories, flower arrangements- types and styles, home lighting- requirement, types.

Module 9.

- Space designing and space organisation- meaning, types. Creating a life space- personal life space, factors and goals in planning a space. Classification of life space. Internal and external space organisation. Principles of Architecture- types. Architectural forms of different periods- Egyptian, Greek, Gothic, Roman, Renaissance, Indian- ancient and modern, Kerala- ancient and modern.

Module 10.

- Land scaping- scope and importance of land scaping. Elements, principles and components of landscaping. Soil- texture, composition, types, pH, preparation of beds. Propagation of plants- methods, Potting, repotting and transplantation, Watering- methods and fertilizer use, After-care of plants. Indoor gardens. Contemporary trends in landscaping.

Unit IV

Textile Science and Fashion Designing

Module 1. Study of Fibres

- Definition, primary, secondary and miscellaneous properties and classification. Production, properties and uses of Textile fibres- Cotton linen, wool, silk, rayon, nylon, and polyester. Methods of identification of textile fibres.

Module 2. Study of yarns

- Definition, process of making fibre in to yarn- Hand, Mechanical-Conventional-Ring spinning, Direct-open end spinning and chemical. Classification of yarns-Types - simple, complex, textured, bi-component, biconstituent and blends, Twist, 4Count .

Module 3. Fabric structure

- Weaving- Loom parts and its operations,
- types of loom- projectile, rapier and jet loom.



- Basic weaves- Plain, twill and satin. Fancy Weaves-, Jacquard, dobby, lappet, clip spot, swivel, crepe and double cloth.
- Characteristics of woven fabrics –warp and weft, grain, selvedge, thread count and balance.
- Other methods of fabric construction- Knitting, Felting, Lace making, Laminating, bonding, and Braiding

Module 4. Dyeing, Printing and Finishes

- Classification of dyes Natural, Artificial- acid, basic, disperses, vat, naphthol, pigment, sulphur, and mordant. Methods of dyeing- stock, yarn, piece, product, cross and union dyeing-Types- beam, jig, winch, and jet.
- Printing:-Direct- Roller, Block, Screen, Stencil and Spray painting. Resist- Tie & dye, Batik and Discharge.
- Finishes:- Definition ,purpose, classification, and types-singeing, bleaching, mercerization, calendaring, shrinkage control, sanforizing, crabbing, beetling, sizing, weighting, shearing, fulling, schrienerizing, crepe, Special finishes-water proofing, flame proofing ,and anti bacterial finish.

Module 5. Testing and Care of fabrics

- Testing of fibres, yarns, and fabric and importance of quality control and research institutions. Textile labeling, brand names, quality marks, registered trademarks, eco-marks, aftercare characteristics, labels, symbols and applications. Care of clothes, laundering different types of clothes, cleaning agents-methods of removing different types of stains.

Module 6.

- Fashion:- Definition, concept, trend, style, classic, fad and silhouette. Principles, factors affecting fashion, fashion life cycle and Role of a fashion designer.

Module 7.

- Elements and Principles of garment designing:- Psychosocial aspect of clothing,

clothing and wears, Personality factors and clothing choices.

Module 8.

- **Traditional Textiles and Embroideries of India:-** Kashmiri shawl, Kashmiri Embroidery, Phulkari, Kanthas of Bengal, Jamdani, Brocades of Varanasi, Himru&Amru, Tanchoi Silk, Chanderi saree, Kanchipuram silk, Chikankari of Uttar Pradesh, Ikat of Gujarat and Pochampally, Patola of Gujarat, Chamba roomal ,Tenia roomal, Paithani Srees, Kutch Embroidery, Mysore silk, Applique work of Andrapradesh, Kasuti Ebroidery of Karnataka and Banjara Embroidery.

Module 9.

- **Pattern making and Garment Construction:-** Knowledge of basic process of garment construction- Tools and equipment for measuring, marking, cutting, pressing and finishing. Sewing machine- parts, operation and care. Taking body measurements, Principles and techniques involved in pattern making - Drafting, Draping and Flat pattern- Lengthening and shortening, increase and decrease of waist line and bust line, problem figures- Broad and narrow shoulder and importance of pattern grading. Steps in garment construction- Preparing fabrics for construction- shrinking and finishing, Marking, Cutting and Stitching- Seams, plackets, fasteners, collars, sleeves bias and its application.

Module 10.

- **Fashion marketing and Merchandising:-** Definition, Fashion marketing concept, fashion consumer behavior, 4 p's in Marketing. Fashion business and Merchandising, Merchandising steps, Role of Merchandiser.



Unit V
Extension and
Development Communication

Module 1. Extension Education & Social Change

- Meaning, definition, principles, objectives, philosophy. Social change- Conceptual analysis of society, rural and urban communities, social groups – classification of groups, nature, meaning and directions of social change.

Module 2.

- Rural basic institutions & Democratic decentralisation: - School as an agency of social change. School – community relationship. Co-operatives and its types, Panchayat- principles of democratic decentralization- 3 tier system of Panchyathi Raj- evolution, set up and function at central, state, district, block, village levels. 73rd and 74th Amendments in the Constitution.

Module 3.

- **Rural Development** – Approaches- concept, nature and purpose of administration in extension – meaning, types, principles, organisation, control and supervision, co-ordination and training. Leadership – types of leaders, Training institutes in Extension & Rural development- ETC, SIRD, NIRD.

Module 4.

- Programmes in action: Ongoing programmes and services for poverty alleviation, economic empowerment, nutrition, health and upliftment programmes for women and children. New initiatives of Govt of Kerala for the empowerment of youth, women, children and elderly.

Module 5.

- Extension Programme Planning – need, principles of programme building. Programme Development Cycle and its

components. Plan of work- components of a plan of work.

Module 6.

- Motivation in Extension – meaning and methods of motivation, need for motivating people in extension work. Evaluation and feedback – need, criteria and methods of evaluation.

Module 7.

- Adoption- Diffusion in Extension: Adoption – Diffusion- Innovation process in Extension- Stages of adoption – adopter categories.

Module 8.

- Adult Education in Extension- need for adult education, planning, implementation, evaluation of adult education programmes. Concepts of formal, informal, non-formal, continuing and social education in functional literacy. Role of IAEA, NLM, TLC, NCERT, UGC, Directorate of Extension, ECCE, Continuing Education Centres, SRC in imparting adult education programmes.

Module 9.

- Development Communication – meaning, types, elements and models of communication. Barriers in communication. Extension Methods – Individual, Group and Mass. Audio Visual aids- types, its uses in classroom teaching. Cone of experience; preparation of different audio- visual aids- their individual advantages and disadvantages. Advanced methods of communication – ETV/ criteria for assessing ETV. Role of ICT in Communication and Rural development.

Module 10.

- Social problems and issues – Population education- concepts and definitions, population explosion, illiteracy, unemployment, poverty. Social issues- alcoholism, prostitution, violence, suicide, drug abuse, RTI/STI, HIV/ AIDS.



Unit VI

Research and Development in Family and Community Science

Module - 1. Research Methodology

- Types of research- basic, applied and action. Variables - independent and dependent, control and intervening. Sampling techniques- Random, systematic, stratified, purposive, cluster samplings. Methods and tools - Observation, Interview, Survey, Experimental, Clinical.
- Observation, Interview schedule, questionnaire, rating scales, attitude scale. Objectives - definition, significance, Hypothesis- meaning, importance, types- null and alternative.

Module 2. Statistics in Home Science Research:

- Measures of central tendency - average, mean median, mode, quartile, percentile, range, SD. Data Collection - pilot study, primary and secondary data. Basic Statistical tools in data interpretation- t-test, ANOVA, chi square, Z test, correlation.

Module 3. Scientific Writing

- Different forms of scientific writing- articles in journals, research notes and reports, review articles, monographs, dissertations, bibliography, book chapters and articles. Parts of Research report- introduction, review of literature, methodology, result and discussion, summary and conclusion, abstract, reference. Graphs, tables, histograms, pie diagrams.

Module 4. Developmental trends and issues-

- Indicators of development in Kerala - Demographic profile- vital statistics, literacy rate, HDI, GDP, per capita income, poverty- BPL & APL families, environmental sanitation.
- Community health and nutritional status- life expectancy, morbidity, maternal and

child health, baby friendly hospitals, neonatal clinics, mental health clinics, adolescent clubs, RCH, adolescent health, youth, adult and geriatric health care .

- Women empowerment- Education, Employment- Organized and Unorganized sectors, economic independence, legal literacy, Organizational support- SHGs and Microcredit- Kudumbasree, Mahila Samakya Society, KSWDC.
- Entrepreneurship and its development- definition, types, characteristics, factors affecting entrepreneurial growth - economic, social, cultural and personal factors. Role of SIDCO, IDBI, KITCO, SEWA, KSIDC, SIETI, KVIC, SSI.
- Developmental Issues: -Unemployment, Migration from other places, decrease in agricultural production. Insufficient care homes and day care centres for children and elderly.

Module 5. New trends in Human development

- Management of differently abled children, Life skill education, guidance and counseling in schools., career clinics, school counselors, special and innovative approaches with children, Transactional analysis, play therapy, music therapy, art therapy, biblio therapy, horticultural therapy, yoga and meditation, stress management techniques, , aptitude tests, performance tests, advances in detection and assessment of problems ,stem cell detection and therapy

Module 6. New trends in Textiles

- Textile fibres- coolmax, thermostat, lycra, oasisfibre, tactel, lyorell, lencell. Eco friendly fibres - organic cotton, jute, bamboo, banana, flax, eco friendly dyes. Fabrics- Medicine / Ayur fabrics, Nano fabrics, Technical fabrics, Anti microbial fabrics.

Module 7. New trends in Communication

- Information kiosks, interactive video and tele conferencing, tele text, virtual learning, tech talks, pod cast, multimedia presentations,



smart classes, e-learning and e-resources. Cyber Extension – definition, advantages and limitations.

Module 8. Nutritional Advances

- Nano foods, Zero calorie foods, GM foods, Fortified foods, Nutrigenomics, Nutrigenetics, Nutraceuticals. Defence, High altitude nutrition, Space and Sports Nutrition.

Module 9. New trends in Resource Management

- Modular kitchen, ergonomic furniture's for home, school, institutions and community. Modern trends in landscaping, window decorations and furnishings and accessories. Recent trends in housing – green housing, geriatric housing.

Module 10. Eco concerns and Management

- Pollution- soil, land, air, water, noise. Waste- Unscientific Agricultural practices- Green house effect, global warming, major health hazard. Water management, Environmental protection- practices and programmes, Organic farming, safe food, environmental protection programmes.

16. Islamic History

Unit I

Islam Under the Prophet and Pious Caliphs

Module. I :- Arabia, the Cradle of Semites .

- Geographical features of Arabia-Ayyam al Arab – The Jahiliyah days – The Bedouin Life-pre Islamic poetry-Mua'llaqat -Status of women - Makkah and Ka'aba-Arabs as Semites

Module 2. Era of Prophet Muhammed

- Ancestry- Early Life- Harb al Fijar-Reconstruction of Ka'aba- Commencement of the mission- Opposition- Hijrah

Module 3. Prophet at Madinah

- Muhajirs and Ansars- Medinah Charter- Battles of the Prophet- Truce of Hudaibiyah- Victory over Makkah- Farewell Sermon- Prophet as a statesman

Module 4. Principles of Islam

- Articles of faith and Obligatory duties- Socio-political and Economic concepts-Principle of unity, equality and brotherhood- Status of Women in Islam

Module 5. The caliphate

- Evolution of Islamic republic -the caliphate- election of Abu Bakr-caliphal address- Apostasy movement and Riddah wars- Compilation of the Holy Qur'an

Module 6. Caliph Umar

- Nomination to caliphate- Political expansion at Byzantine and Persian provinces- Darul Sulh and treaty of Jerusalem- Administrative innovations - Consolidation of the republic

Module 7. Caliph Uthman

- Collegium and election to caliphate- Centrifugal tendencies- The Sabites and assassination of uthman- standardization of Qur'an- Formation of navy-

Module 8. Caliph Ali

- Assumption of caliphate – civil disturbances- Jamal and Siffin- Arbitration of Adhurh- origin of Kharijites-Shiism – Assassination of Ali

Module 9. Political Philosophy of Islam

- Caliph as the vicegerent of God- sovereignty of Allah- Bay'ath and Shurah council as democratic manifestation

Unit II

Muslim dynasties of the Middle Ages

Module 1. The Umayyads

- Establishment of the dynasty- Mu'awiyah- period of political transition – administration