Syllabus for M.Phil/Ph.D Entrance test

Subject: Home Science (Food Science & Nutrition/ Dietetics & Clinical Nutrition)

Unit I

a. Physiology

- Living cell, Blood and other body fluids.
- Cardio-vascular, digestive, respiratory, Excretory and Nervous system.
- Endocrine glands, muscles, sensory organs, immunity,
- Reproduction and Development.

b. Biochemistry

- Carbohydrates, lipids, proteins and their metabolism
- Nucleic acids and their metabolism.
- Transport of nutrients across cell membrane.

Unit- II

a. Microbiology

- Micro organisms associated with food, their sources and effect of environmental factors on their growth.
- Micro-biological intoxication & infections. Different food-borne disease, Useful Microorganisms.
- Microbiology of water and control of micro organisms.

b. Food processing and Technology

- Principles in food processing operations: Thermal, Refrigeration, Freezing and Dehydration, Ionizing Radiations Chemical Preservation and Fermentation.
- Processing technology of foods and Nutritional implications for cereals & pulses, fruits & vegetables, Milk and its products, Meat, Fish, Egg, Fats & Oils, Spices and Food Additives.

Unit – III

a. Advanced Food Science

- Evaluation of food by sensory and objective methods

- Colloidal chemistry, Fortification and Enrichment of foods
- Sugar, Starch, Milk, Egg and Pulse/Cookery.
- Vegetables & fruits, fats & Oils, Meat, Fish & Poultry.
- Food standards & Laws, Foods Adulteration.

b. Advanced Nutrition:-

- Body composition, Energy, Water, Carbohydrates, Proteins & Lipids as nutrients inside the body.
- Detoxification and its mechanism.
- Macro & micro elements, their biochemical role, absorption, deficiency, transport and storage inside the body.
- Fat & water soluble vitamins: their absorption, Biochemical functions, Metabolism & Antagonists,

Unit - IV

a. Maternal and child Nutrition

- Perspective in human nutritional requirements.
- Nutrition in Pregnancy, Lactation, Infancy, Preschool age, School age and Adolescence.
- Nutrition for Adult and Aged.
- Assessment of nutritional status of community.
- Various Nutritional Intervention programmes for improving health of the society.

b. Clinical & Therapeutic Nutrition

- Dietetics, factors in patients care & rehabilitation Modification of normal diet.
- Diet in relation to fever & infections, Gastro intestinal tract disease, disorders of liver and Gall bladder, Renal disease, Metabolic disorders, obesity and under nutrition.

Syllabus for M.Phil/ Ph.D Entrance Test
Subject: Home Science (Human Development)

Unit I

- Principles of growth and development.
- Developmental tasks throughout the life span.
- Stages of pre-natal development, birth process, types of child birth.
- Physical, motor and language development in Infancy.
- Physical, cognitive, emotional, social and personal development in early and late childhood years.
- Adolescence and its characteristics, Issues and identity,
- Development of Formal Operations.
- Personality, Health, Sexuality.

Unit – II

- Physical continuity & change in Adult years.
- Health and disease in middle & late Adulthood.
- Personality changes in middle & Late Adulthood.
- Menopause in women, adult sexuality.
- Health and disease in old age.
- Death, dying and bereavement.

Unit – III

- Freud's Psychological Theory. Current status & Cross cultural relevance.
- Alfred Adler's Individual Psychology. Current status
- Piaget's Cognitive development theory. Current status
- Theories of learning. Watson, Pavlov & Skinner.
- Theories of Moral Development. Piaget's & Kohlberg.
- Contribution of Thinkers to the development of ECCE- Frobel, Maria Montessori, M.K. Gandhi, Rabindra Nath Tagore.
- Organization and programme planning of pre-school centres.

Unit – IV

- Concept and purpose of guidance and counseling.
- Elements of counseling; steps in counseling.
- Guidance & counseling of special groups.
- Universal declaration of human rights 1948 (Art 3, 5, 7, 9, 18, 25, 26).
- International conventions on child rights.
- Techniques of identification and assessment of disability.
- Spina bifida, Spinal cord injuries, Amputation, Autism, Phobias, schizophrenia, ADHD.
- Approaches to the study of creativity: psychological dynamical approaches – (Freud) & Psychometric approach – (Guilford & Torrance).
- Creativity & Personality Development factors: Creativity & Intelligence, Creativity & Achievement.

M.Phil Syllabus for Entrance Examination

Subject: Extension & Communication

Unit I

Indian economy, structure & organization of rural, urban and tribal areas, poverty, unemployment, special programmes for poor, women and children, employment policy, new economic policy, co-operatives, community, social groups, theories of development, industry and agriculture, communication techniques, A.V Aids, communication & extension approaches, mass media approaches of communication, extension models & approaches, national extension System, support structure and their functions.

Unit – II

Research methods and data gathering instruments, processing and analysis of data, analysis & interpretation of data. Training & learning, learning methodologies. Programme planning, plan of work, programme implementation, evaluation, follow up and documentation. Gender and development, violence against women, policies and programme for women development and support system, legal empowerment.

Unit III

Concept of health care, community health needs & problems, health care services, management information system in health. Women entrepreneurship. Community nutrition, methods of assessing nutritional status of the community, nutritional problems, national & international agencies involved in improving nutritional status of the community. Methods for community participation, space related, time related & PRA relation method.

Unit IV

Women & society, women and nutrition, women and health, policies, legislation & empowerment of women. Concept and management of service organization, organizations working for the service of women and children, organizations working for service of youth and groups with special needs. Govt and NGOs working for the service of groups with special needs. Extension personal management, organization and planning in extension management, staffing and leading in extension management, controlling and efficiencies of personal in extension management.