

SYLLABUS FOR THE POST OF LAB. ASSISTANT
INSTITUTE OF HOME SCIENCE PGD-HO-7

Unit I

Advanced Nutrition

- ❖ Body composition, Energy, Water, Carbohydrates, Proteins & Lipids as nutrients inside the body.
- ❖ Macro & micro elements, their biochemical role, absorption, deficiency, transport and storage inside the body.
- ❖ Fat & water-soluble vitamins: their absorption, Biochemical functions, Metabolism & Antagonists.
- ❖ Transport of nutrients across cell membrane.
- ❖ Emerging concepts in human nutrition.

Unit II

Life Span Nutrition

- ❖ Nutrition in Pregnancy & Lactation, Infancy, Childhood
- ❖ Nutrition during adolescents and adulthood.
- ❖ Geriatric & Sports Nutrition.
- ❖ Assessment of nutritional status of community.
- ❖ Various nutritional intervention programmes for improving health of the society.

Unit III

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
- ❖ Acute and Chronic diseases of heart
- ❖ Metabolic disorders, obesity and under nutrition.

Unit IV

- ❖ **Carbohydrates:** Properties of monosaccharides, optical isomerism, mutarotation, biologically important derivatives of monosaccharides (glycosides, sugar alcohols, sugar acids, sugar phosphates, deoxy sugars, amino sugars), disaccharides (lactose, maltose, sucrose) structures and functions of poly-saccharides, (starch, glycogen, pectin, cellulose), mucopolysaccharides (hyaluronic acid, heparin, chondroitin sulphate). Flatulence factors.
- ❖ **Metabolism:** Glycolysis and TCA cycle, gluconeogenesis, glycogenolysis, hereditary disorders of carbohydrate metabolism.

Unit V

- ❖ **Lipids:** Triglycerides, fatty acids - nomenclature and their properties, phospholipids, lecithin, cephalin, sphingomyelins, glycolipids, lipoproteins (composition and transport) steroids (cholesterol and bile acids) prostaglandins.
- ❖ **Proteins:** Peptides and proteins. Determination of amino acid composition of proteins (N & C terminals). Orders of protein structure, factors responsible for protein structure, structure of collagen, denaturation, precipitation of proteins, isolation and purification of proteins. Oxidative degradation of amino acids. Urea cycle.

Unit VI

Communication Techniques

- ❖ Communication, Audio Visual Aids
- ❖ 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.
- ❖ Mass Media Approaches of Communication.
- ❖ Concept of development-communication models and approaches.

Unit VII

Methods for Community Participation

- ❖ Conceptual Specification
- ❖ Space Related PRA Methods - social map, resources map mobility map, services and opportunities map, transect map
- ❖ Time Related PRA- Methods- daily activity schedule, time line, seasonal diagram, trend analysis, dream map
- ❖ PRA Relation Methods-Venn diagram, pie diagram, spider diagram, body mapping

Unit VIII

Extension Management

- ❖ Extension-Definition and meaning, objectives, need, process and principles of extension. Personal management- Meaning. Job analysis, job description and job specification
- ❖ Planning: Definition, requirements, elements, contingency. Organizing: Definition, requirements, line and staff functions. Staffing: Definition, Requirements of effective staffing.

Leading: Definition, Requirements of effective leading. Controlling: Definition, Requirements of effective controlling, Monitoring and evaluation

- ❖ Organizations working for the Service of Children
- ❖ Organizations Working for the Service of Youth and Groups with Special Needs

Unit IX

Gender and Development

- ❖ Concept of gender, gender roles, changing trends, matrix shift from welfare to development and empowerment gender and development.
- ❖ Status of women- Status meaning, Situational analysis, Demographic education employment, political and health, changing scenario.
- ❖ Dowry, Domestic violence of female foeticide and infanticide, sexual harassment and exploitation.
- ❖ Role and functions of the department of women and child development, ICDS, National Commission for women.

Unit X

Extension programme planning

- ❖ Programme Planning: Definition, Objectives, Meaning and importance of programme planning in extension. Principles of programme planning.
- ❖ Steps of Programme Planning: Collection of facts, Analysis of situation, Identification of problems, deciding on programme objectives, Developing plan of work
- ❖ Programme implementation: Participation of organizations in programme planning.
- ❖ Extension Evaluation: Evaluation- Definition, Nature, Types, Purpose Components to be evaluated, Evaluation principles.