PERIYAR INSTITUTE OF DISTANCE EDUCATION (PRIDE)

PERIYAR UNIVERSITY

SALEM

DIPLOMA IN HEALTH AND SANITATION

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Paper I: HUMAN ANATOMY AND PHYSIOLOGY

Unit I Musculo-Skeletal System and Sense Organs

Musculo-skeletal system: structure and functions of bone, cartilage and connective tissues; Types of muscles, structure and functions. Sense Organs: Structure and function; Role of skin, eye, nose and tongue in perception of stimuli

Unit II Central Nervous and Endocrine System

Central Nervous System: Structure and function of brain and spinal cord; Hypothalamus and its role in various body functions; Structure and functions of neuron and role of neurotransmitters. Endocrine system: Structure, function and role of hormones and regulation of hormonal secretion.

Unit III Cardio-Respiratory System

Circulatory System: Structure and the functions of heart and blood vessels; regulation of cardiac output and blood pressure. Respiratory system: Structure and function; mechanism of respiration; Role of lungs in the exchange of gases; Effect of exercise and training on cardio-respiratory system.

Unit IV Digestive and Excretory System

Digestive system: Structure and functions; Secretory, digestive and absorptive functions; Role of liver, pancreas and gall bladder in digestion process. Excretory system: structure and function of nephron and urine formation; Role of kidney in water, electrolyte and acid base balance.

Unit V Blood, Reproductive and Immune System

Blood system: Formation and function of plasma proteins; Erythropoesis; Blood groups and Rh factor; Blood indices for diagnosis of specific diseases or disorders. Immune system: Cell mediated and humoral immunity; Activation of WBC and production of antibodies; Role of inflammation and defense.
Reproductive system: structure and function of male and female reproductive organs.

References:

Paper II: Community Health and Nutrition

Unit I:

**Fundamentals of Human Nutrition:** Nutrition and Health definition; Nutrients: Carbohydrate, protein, fat, vitamins, minerals classification and its physiological functions; digestion, absorption and metabolism of nutrients; Physiological functions of water and its role in electrolyte balance; Definition of energy and calorie; the concepts of energy balance and expenditure.

Unit II

**Nutrition through the life cycle:** Definition of Recommended Dietary Allowances (RDA), Reference men and women; Nutritional requirements for different age groups such as infants, children, adolescent, adults and old age; The concepts of balanced diet, Basic five food group classification, food pyramid and exchange list for health living; Menu planning: Principles of meal planning and the factors influencing it.

Unit III

**Introduction to community nutrition:** Definition of community nutrition; the relationships between food and health; Prevalence of nutritional problems in the community: Malnutrition: Under and over – nutrition, causes, signs and symptoms, prevention and treatment; Vitamin A, Iodine and Iron deficiency: causes, signs and symptoms, prevention and treatment; Over-nutrition health problems: overweight and obesity related health risks.

Unit IV

**Assessment of Nutrition status of the community:** Nutritional status definition; Assessment methods: direct assessment such as anthropometry, biochemical method, clinical examination, diet survey, biophysical methods; Indirect methods: Food balance sheet, Agricultural data, ecological parameters and vital statistics – use of growth chart, merits and limitations of each method.
Unit V

**National and International organization working for community health:**
Need of nutrition and health education: Principles of planning, executing and evaluating, nutrition education programmes and problems in conducting health and nutrition education programmes. The role of National Organization in community health: National Nutritional Policy, supplementary feeding programmes, ICDS programmes, Tamil Nadu Integrated Nutrition Programme (TINP), Mid day meal programme Special Nutrition Programme, and NNMB; The role of International Organizations in community health: UNICEF, FAO and WHO.

**References**

   New Delhi.
Paper III: Behavioral Science and Communication

Unit I

Concepts in behavioral science: Prejudice, attitude, personality, traits, character. Attitude: concept and meaning of attitudes, factors affecting formation of attitudes, type of attitudes, characteristics of attitudes. Personality: determinants of personality, personality and behavior. Group dynamics: concepts and meanings, types of groups, determinants of group behavior, difference between groups and teams.

Unit II


Unit III

Communication: Meaning, definitions, elements and significance. Need for communication - Evolution of Communication - Different milestones in communication, Variables of communication - Different forms of communication Verbal, Nonverbal, written communication. Level of communication - inter personal communication – communication and socialization. cultural transmission, dysfunctions of mass communication – communication and research.

Unit IV


Unit V

Reference:


**Paper IV: Environmental Sanitation**

**Unit I**


**Unit II**

**Diseases and Illness:** Transmission of diseases through air, water, food and contact. Other sources: Insect vector and rodent control-Housefly, Mosquito and other carriers of diseases., Preventable measures: cleanliness, quality of life, positive health behavior. Health hazards and control measures: housing keeping, proper food habits and housing facilities.

**Unit III**

**Housing:** characteristics of house: housing location, neighbourhood. Basic elements of good housing - ventilation and spacing, details of house plumbing and drainage. Industrial hygiene-sources of dust and gaseous pollutants in the industry occupation hazards, exposure tolerance level of protection measures and legal control.

**Unit IV**


**Unit V**

Protective measures for environmental degradation: environmental monitoring, creating awareness on environmental protection, legal protection on environment. Chipko Movement, Mono lake case, love cannal case, Kyoto Protocol.
References


Paper V: Public Health Administration

UNIT I


UNIT II


UNIT III

Public Health Infrastructure: Essential Health Care Services and Implications, Future of the Public’s Health, National and International Organizations’ effort, Community responsibilities in Medicine and Public Health.

UNIT IV


UNIT V

Text Books:


Practical

An enrolled student has to undergo a one month training at hospitals either in government or in private under the sanitary and health conditions which is prevailing there. He/she to get the certificate from the administration which state that the training provided by them must be related to the title of the course: Health and Sanitation.

The enrolled student has to submit an original work done by him/her starting from introduction, review of literature, methodology and experience in the hospitals in the form of analysis and interpretation beside conclusion too. The report does not exit 8000 word to 10000 words. The report also should consist of certificates, declaration, content, acknowledgment and tables, diagrams, graphs (if any).

The field work components are mandatory for the enrolled students. For the report the students can get 100 marks the full length report should be submitted to the head of the Department of Sociology, before the last day of the examination conducted for the PG diploma and diploma for the health and sanitation.