**FUNDAMENTALS OF HUMAN ANATOMY & PHYSIOLOGY (THEORY)**
**Course Code: ANA/PHY.101T**
**Credit Hours: 3**
**Semester: I**

**SECTION I: HUMAN ANATOMY**

**UNIT-I : Structure & function of human body (2 Lectures)**

- Definitions, Subdivisions of Anatomy, Terms of location and position, Fundamental Planes, organization of human body. Cell (structure & function). Tissues (Epithelium, Connective, Muscular, Nervous)

**UNIT- II : Locomotion and support (2 Lectures)**

- *Skeletal system:* Types of bones, Bones and their parts, Divisions of skeleton
- *Joints:* classification, types of movements with examples.

**UNIT- III : Nervous system (2 Lectures)**

- *Central nervous system*: Spinal Cord (anatomy, functions), reflex- arc, meninges.
- *Brain:* Hind Brain, Midbrain, Forebrain.

**UNIT-IV : Sensory System (2 Lectures)**

- Anatomical introduction to skin & Sense organs: Eye, Ear ,Nose

**UNIT-V : Circulatory system (2 Lectures)**

- *Heart:* size, location, coverings, chambers, blood supply, the blood vessels. General plan of circulation, pulmonary circulation. Names of arteries and veins and their positions.

**UNIT- VI : Respiratory system (2 Lectures)**

- Organs of Respiratory System. Brief knowledge of parts and position
- *Conducting portion:* Nose, nasal cavity, Para nasal air sinuses, Larynx, trachea, bronchial tree.
- *Respiratory portion:* Pleura and lungs.

**UNIT- VII: Digestive system (2 Lectures)**

- Components of Digestive system, Anatomy of organs of digestive system, mouth, tongue, teeth,
- salivary glands, liver, biliary apparatus, pancreas.

**UNIT- VIII: Excretory system (2 Lectures)**

- *Kidneys:* location, gross structure, excretory ducts, ureters, Urinary bladder, Urethra.

**UNIT- IX: Reproductive system (2 Lectures)**

- *Male Reproductive System:* Testis, Duct system.
- *Female Reproductive System:* Ovaries, Duct system

**UNIT- X : Endocrine system (2 Lectures)**

- *Endocrine glands:* Positions, Hormones secreted and their functions- Pituitary, Thyroid parathyroid, Adrenal glands, Gonads & Islets of pancreas

**SECTION II: HUMAN PHYSIOLOGY**

**Unit I – Cell** **(1 Lecture)**

Cell membrane& cytoplasmic organelles- Functions

**Unit II – Blood** **(4 Lecture)**

Composition and function of blood

Blood Cells- Types, structure and functions

Blood group- ABO Blood group & Rh factor, Blood groups and uses of blood grouping. Rh incompatibility

Blood Clotting: Definition, Mechanism of haemostasis, Physiology of clotting mechanism.

Anemia- Definition, Types and Clinical features of anemia.

**Unit III – Cardiovascular System** **(3 Lecture)**

Functions of heart and blood vessels

Heart rate :- Definition and factors affecting it

Cardiac cycle: Definition and events in the cardiac cycle, Heart sounds

**Unit IV - Respiratory System** **(2 Lecture)**

Functions of Respiratory organs

Mechanism of Respiration: Inspiration & expiration, Muscles of Inspiration & Muscles of expiration, Accessory muscles of Respiration

Lung Volumes and Capacities: Vital Capacity, Tidal Volume, Residual Volume

**Unit V – Gastrointestinal system** **(3 Lecture)**

Functions of various parts of GIT

Digestion & absorption of carbohydrates, fats, protein in various parts of GIT

Functions of Saliva, Gastric Juice, Bile, Pancreatic Juice

Functions of Liver , Gall Bladder and Pancreas

Movements of Small Intestine and large Intestine

**Unit VI - Excretory System** **(4 Lecture)**

Functions of kidney, ureters, urinary bladder and urethra

Nephron & Function of various parts

Mechanism of Urine Formation

**Unit VII – CNS** **(4 Lecture)**

Introduction: Organization and function of the nervous system

*Central Nervous System:* General Description- Cerebral hemisphere (cerebrum); Basal ganglia, Thalamus; Hypothalamus, Brain stem: Medulla; Pons, Mid Brain; Reticular formation, Cerebellum, Spinal Cord: Structure and function; Ascending (sensory) tracts; Descending (motor) tracts, Cerebrospinal fluid (CSF)

*Peripheral nervous System:* Somatic nervous system: Spinal nerves; Reflexes: Mono and Polysynaptic reflex; Cranial nerves

*Autonomic nervous system (ANS):* Sympathetic, parasympathetic

**Unit VIII - Muscular System** **(4 Lecture)**

Structure & Functions of skeletal muscle, smooth muscle & Cardiac muscle

Skeletal Muscle: -Action Potential, Excitation contraction coupling, Muscle tone, Neuro- Muscular Junction

**Unit IX – Endocrine System** **(5 Lecture)**

Hormones: GH, Thyroid Hormones, Parathyroid Hormones, Insulin, Glucocorticoids, Mineralocorticoids, ADH, oxytocin, Testosterone – their source & actions

**FUNDAMENTALS OF HUMAN ANATOMY & PHYSIOLOGY (PRACTICAL)**
**Course Code: ANA/PHY.101P**
**Credit Hours: 1.5**

- Identification and description of all anatomical structures.
- Demonstration through slides, models, charts etc..
- Measurement of pulse, blood pressure
- Identification/counting of blood cells by study of peripheral blood smear
- Determination of blood groups, bleeding/clotting times. Estimation of Hb

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**CONCEPTUAL MICROBIOLOGY & PATHOLOGY (THEORY)**
**Course Code: MIC/PAT.102T**
**Credit Hours: 3**
**Semester: I**
**SECTION I : MICROBIOLOGY**

**UNIT- I: Origin and Evolution of Microbiology (3 Lectures)**

- Introduction, History & scope of Microbiology
- General characteristics of Microorganisms: Bacteria, viruses, fungi.

**UNIT - II: Study of Common Lab Instruments (3 Lectures)**

- Microscope: Types , principles & uses
- Autoclave, Hot air oven, Incubator, Laminar air flow, Colony counter : Principles & uses

**UNIT III: Morphology of Bacteria & Viruses (3 Lectures)**

- *Bacterial anatomy:* Cell wall, Cell membrane, Capsule, Flagella, Nucleoid, Bacterial Spore.
- Structure of viruses, Concepts of replication & cultivation
- Study of bacteria: Preparation of Stains, various Staining techniques (Simple staining, Gram staining, Acid-fast staining, Negative staining & Albert staining).

**UNIT- IV**: **Growth & Nutrition of bacteria: (3 Lectures)**

- Culture media and Culture methods
- *Bacterial Growth:* Growth Curve, Generation Time, Environmental factors affecting growth.
- Bacterial nutrition: Nutritional groups, Common Nutritional requirements

**UNIT- V: Control of Microbial Growth (3 Lectures)**

- Sterilization and disinfection

**UNIT-VI: Immunity & Infection (3 Lectures)**

- *Immunity:* Types of immunity, Antigens & Antibodies, Prophylactic Immunization
- *Infection:* Types, Various routes & modes of transmission, Nosocomial Infections

**UNIT-VII: Biomedical Waste & Management (2 Lectures)**

- Waste categories, Waste treatment & disposal

**SECTION II : PATHOLOGY**

**UNIT-I: Introduction (1 Lectures)**

- Definition, important terminology, different branches

**UNIT-II: Cell Injury and Cellular Adaptations (4 Lectures)**

- *Cell Injury:* types of cell injury, etiology of cell injury, morphology of cell injury, cellular swelling.
- *Cell Death:* types- Autolysis, Necrosis, Apoptosis & Gangrene.
- *Cellular Adaptations*: Atrophy, Hypertrophy, Hyperplasia & Dysplasia.

**UNIT-III: Inflammation (3 Lectures)**

- Acute inflammation - vascular event, cellular event, inflammatory cells.
- Chronic Inflammation - general features

**UNIT-IV: Hemodynamic Disorders (3 Lectures)**

- Edema, hyperemia, congestion, hemorrhage, thrombosis, ischemia & infarction.

**UNIT-V: Neoplasia (2 Lectures)**

- Definition,difference between benign tumor and malignant tumor.

**UNIT-VI: Healing (2 Lectures)**

- Definition, different phases of healing, factors influencing wound healing.

**CONCEPTUAL MICROBIOLOGY & PATHOLOGY (PRACTICAL)**
**Course Code: MIC/PAT.102P**
**Credit Hours: 1.5**

***Microbiology***

- Handling and maintenance of instruments required for routine lab work.
- *Various staining Techniques:* Gram stain, Acid-fast stain, Negative stain, Albert Stain.
- Various culture techniques
- Demonstration of Sterilization methods
- Preparation of commonly used culture media: Nutrient agar, Blood/chocolate agar, MacConkey agar, Sabouraud dextrose agar.

***Pathology***

- Components & setting of the Compound microscope.
- Focusing of object.
- Use of low & high power objectives of microscope.
- Use of oil immersion lens.
- Care and Maintenance of the microscope.
- Different types microscopy

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal ($1^{st}$ ,$2^{nd}$ Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**CONCEPTUAL BIOCHEMISTRY (THEORY)**
**Course Code: BIO.103T**
**Credit Hours: 2**
**Semester: I**

**UNIT -I: Introduction to Biochemistry (2 Lectures)**

- Important definitions (Diffusion, Osmosis, Surface Tension, Adsorption , Absorption) & scope of biochemistry

**UNIT -II: Carbohydrate (3 Lectures)**

- Classification with structures
- Importance of Carbohydrates

**UNIT -III: Lipids (3 Lectures)**

- Classification
- Importance of Lipids

**UNIT -IV: Proteins (4 Lectures)**

- Amino Acid: Classification and general Properties
- Importance of Proteins
- Classification of Protein (in brief)

**UNIT -V: Nucleotides (4 Lectures)**

- Nucleoside & Nucleotide
- General structures of Purine and pyrimidine
- Brief discussion of DNA & RNA
- Structure of DNA

**UNIT -VI: Electrolytes (3 Lectures)**

- Source, function & deficiency symptoms of Sodium, Potassium, Calcium, phosphorus, Iron, Zinc & Chloride in human body.

**UNIT - VII: Analytical Chemistry (5 Lectures)**

Concepts of : Percent, Morality, Molality, Normality

- *SI Units:* Deci, Centi, Milli, Micro, Nano, Pico, Kilo, Mega, Giga & Angstrom
- **Normal Values & Interpretations:**
  - *Electrolytes:* Sodium, Potassium, Calcium, Iron, Chloride
  - *Renal Function Test*: Urea, Creatinine, Uric Acid, Glucose
  - *Urine Analysis:* Composition, Colour, Volume, pH, Specific Gravity, Turbidity
  - *Liver Function Test :* SGOT, SGPT, Bilirubin, Albumin, Globulin & Alkaline Phosphatase
  - *Carbohydrates:* Fasting , Random, GTT
  - *Lipid Profile :* Cholesterol, Triglycerides, HDL,LDL, VLDL

**UNIT -VIII: Acids & Bases (2 Lectures)**

- Definition, Classification of acids and bases.
- Physical and chemical properties with examples.
- Arrhenius concept of acids and bases.
- Classification of acids and bases.
- pH, Buffer Solutions

**CONCEPTUAL BIOCHEMISTRY (PRACTICAL)**
**Course Code: BIO.103P**
**Credit Hours: 1.5**

- Preparation of common lab reagents.
- General description of equipment's used in Biochemistry Lab.
- *Working & Uses of:* Spectrophotometer, Water bath, Centrifuges, Analytical Balances, pH meter, Colorimeter.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**HUMAN VALUES & PROFESSIONAL ETHICS**
**Course Code: PMS.104T**
**Credit Hours: 2**
**Semester : I**

**UNIT-I: Need, Basic Guidelines, Content and Process for Value Education (10 Lectures)**

- Understanding the need, basic guidelines, content and process for Value Education
- Self Exploration–what is it? - its content and process; 'Natural Acceptance' and Experiential Validation- as the mechanism for self exploration
- Continuous Happiness and Prosperity- A look at basic Human Aspirations
- Right understanding, Relationship and Physical Facilities- the basic requirements for fulfillment of aspirations of every human being with their correct priority
- Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario
- Method to fulfill the above human aspirations: understanding and living in harmony at various levels

**UNIT-II: Understanding Harmony in the Human Being - Harmony in Myself! (10 Lectures)**

- Understanding human being as a co-existence of the sentient 'I' and the material 'Body'
- Understanding the needs of Self ('I') and 'Body' - Sukh and Suvidha
- Understanding the Body as an instrument of 'I' (I being the doer, seer and enjoyer)
- Understanding the characteristics and activities of 'I' and harmony in 'I'
- Understanding the harmony of I with the Body: Sanyam and Swasthya; correct appraisal of Physical needs, meaning of Prosperity in detail
- Programs to ensure Sanyam and Swasthya - Practice Exercises and Case Studies will be taken up in Practice Sessions.

**UNIT-III: Understanding Harmony in the Family and Society (10 Lectures)**

- Understanding harmony in the Family- the basic unit of human interaction
- Understanding values in human-human relationship; meaning of Nyaya and program for its fulfillment to ensure Ubhay-tripti; Trust (Vishwas) and Respect (Samman) as the foundational values of relationship

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

**BASIC NUTRITION (THEORY)**
**Course Code: CND.105T**
**Credit Hours: 3**
**Semester: I**

- Introduction to nutrition -Food as source of nutrients, functions of food, definition of nutrition, nutrients & energy, adequate, optimum & good nutrition, malnutrition.
- Food guide - Basic five food groups. How to use food guide (according to R.D.A.)
- Role of fibres in human nutrition.
- Carbohydrates: Functions, classification, food sources, storage in body.
- Fats & oils: composition, saturated and unsaturated fatty acids, classification, food sources, function of fats.
- Proteins - composition, sources, essential & non-essential amino acids, functions, Protein deficiency.
- Water - as a nutrient, function, sources, requirement, water balance & effect of deficiency.
- Minerals - macro & micronutrients. - functions, sources. Bioavailability and deficiency of Calcium, Iron, Iodine, Sodium & Potassium (in very brief)
- Vitamins (water & fat soluble) - definition, classification & functions.
- Methods and Effect of cooking & heat processing on the nutritive value of foods

**BASIC NUTRITION (PRACTICAL)**
**Course Code: CND.105P**
**Credit Hours: 1.5**

- Use and care of kitchen equipments.
- Controlling techniques -Weights and measures standard, household measures for raw and cooked food.
- Food preparation and classifying recipes as good, moderate or poor, sources of specific nutrients, Amount of ingredients to be in standard recipe -portion size -
- Beverages - tea, coffee, fruit juice, milk, milk shakes.
- Cereals and flour mixtures - basic preparation & their nutritive value - boiled rice and rice pulao, chapati, puri, paratha, sandwiches, pastas, pancakes, cookies & cakes.
- Vegetables & fruits -Simple salads, Dry vegetables, Curries, fruits preparation using fresh and dried stewed fruit, fruit salad
- Mix and milk products
- Porridges, Curds, paneer and their commonly made preparations, Milk based simple desserts and puddings, custard, kheer, ice cream
- Soups - Basic, clear and cream soups.
- Snacks- Pakoras, cheese toast, upma, pohe, peanut, chikki, til & laddo

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | **Particulars** | **Marks** |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**ENGLISH FOR PROFESSIONALS**
**Course Code: PMS.106T**
**Credit Hours: 2**
**Semester: I**

**UNIT-I: Grammar** **(10 Lectures)**

- Narration.
- Voice change (Use of passive voice particularly in scientific and official writing).
- Use of articles and preposition.
- The language of Doctor and Patient.
- General description and Medical description.
- Medical terminology – roots.
- Prefixes and suffixes.
- Medical abbreviations.
- Punctuation
- Common errors in English.

**UNIT-II: Writing Skills** **(10 Lectures)**

- Precis writing.
- Report writing (with special stress on scientific/technical reports, preparing field/observation report).
- Letter writing/application writing (Social, business letter, applying for a job, for higher studies, Preparing curriculum vitae, subscribing to a journal, letters to the Editor).
- Essay writing

**UNIT-III: Spoken English** **(10 Lectures)**

- Advertisements/Posters
- Telegrams & short post cards
- Note & notice
- Front Desk management, Fixing appointments, getting information – Managing medical representatives, able to answer FAQs, lab reports writing, telephoning in a hospital: the object is to practice influent conversation.

***SCHEME OF EXAMINATION***

| Type of Questions | Total No. of Questions | No. of Questions to be attempted | Marks (each Question) | Subtotal |
|---|---|---|---|---|
| SEC -A (Grammar) | 25 | 20 | 1 | 20 |
| SEC -B (Essay writing) | 3 | 1 | 10 | 10 |
| SEC-C(Precis writing) | 1 | 1 | 5 | 10 |
| SEC-D(Letter writing) | 2 | 1 | 5 | 10 |
| | | | **TOTAL MARKS** | **50** |

**COMMUNICATION AND SOFT SKILLS**
**Course Code: PMS.107T**
**Credit Hours: 2**
**Semester: I**

**UNIT-I: Introduction to Communication** **(5 Lectures)**

- Purpose of Communication
- Process of Communication
- Importance of Communication in Business
- Barriers to Communication
- Measures to Overcome the Barriers to Communication.

**UNIT-II: Types of Communication** **(5 Lectures)**

- Verbal Communication: Importance of verbal communication and Advantages of verbal communication
- Non Verbal Communication: Importance of written communication and Significance of Non-verbal Communication

**UNIT-III: Communication Network** **(5 Lectures)**

- Scope and Types of Communication Network
- Formal and Informal Communication Network
- Upward Communication
- Downward Communication
- Horizontal Communication
- Diagonal Communication.

**UNIT-IV: Letter and Resume Writing** **(5 Lectures)**

- Types of Letter – Formal/Informal
- Importance and function of Letter Writing
- Business Letters / Elements of Structure
- Resume and Covering Letter
- Guidelines for making a Result – Oriented Resume/ Helpful Hints

**UNIT-IV: Interview preparation** **(5 Lectures)**

- Types of Interview
- Preparing for an Interview
- Attending an Interview
- Employers Expectation
- General Etiquette

**UNIT-IV: Group Discussion and Presentation** **(5 Lectures)**

- Process of Group Discussion
- Guidelines
- Helpful Expressions
- Evaluation

**UNIT-VI: Presentation Skills** **(5 Lectures)**

- Importance of Presentation skills
- Organizing Contents/ Structural Elements of a Presentation Concerning Data
- Visual Aids and Voice & Picture Integration
- Guidelines to make Presentation Interesting
- Body Language

**(Note: Every student shall be given 15 minutes of presentation time)**

***SCHEME OF EXAMINATION***

| Type of Questions | Total No. of Questions | No. of Questions to be attempted | Marks (each Question) | Subtotal |
|---|---|---|---|---|
| SEC -A (Fill ups) | 10 | 10 | 1 | 10 |
| SEC -B (Short Essay) | 6 | 5 | 4 | 20 |
| SEC-C (Long Essay) | 3 | 2 | 5 | 10 |
| SEC-D (Letter writing) | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

**ENVIRONMENTAL STUDIES**
**Course Code: PMS.108T**
**Credit Hours: 2**
**Semester: II**

**UNIT-I : Natural Resources (10 Lectures)**

- *Renewable and non-renewable resources :*Natural resources and associated problems.
- *Forest resources :* Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.
- *Water resources :* Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
- *Mineral resources :* Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
- *Food resources :* World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
- *Energy resources:* Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.
- *Land resources:* Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
- Role of an individual in conservation of natural resources.
- Equitable use of resources for sustainable lifestyles.

**UNIT-II : Ecosystems (4 Lectures)**

- Concept of ecosystems, Structure and function of an ecosystem.
- Producers, consumers and decomposers.
- Energy flow in the ecosystem.
- Ecological succession.
- Food chains, food webs and ecological pyramids.
- *Introduction, types, characteristic features, structure and function of the following ecosystem:* Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

**UNIT-III: Biodiversity and its Conservation (3 Lectures)**

- Introduction – Definition: genetic, species and ecosystem diversity.
- *Threats to biodiversity:* habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India
- *Conservation of biodiversity:* In-situ and Ex-situ conservation of biodiversity.

**UNIT-IV: Environmental Pollution (7 Lectures)**

- *Definition, Cause, effects and control measures of :* Air pollution, Water pollution, Soil pollution, Noise pollution, Thermal pollution
- Role of an individual in prevention of pollution.
- *Disaster management:* floods, earthquake, cyclone and landslides.

**UNIT-V : Social Issues and the Environment (4 Lectures)**

- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust

- *ACTS:* Environment Protection Act, Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act

**UNIT-VI : Human Population and the Environment (2 Lectures)**

- Population explosion – Family Welfare Programme.
- Human Rights & Value Education.
- Women and Child Welfare.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

**FOOD SCIENCE (THEORY)**
**Course Code: CND.109T**
**Credit Hours: 3**
**Semester: II**

- ***Cereals:*** Structure and composition, Nutritional value, Processing- Milling, polishing, parboiling, flaking, parching, roasting, use in variety of preparations selection, storage and care, breakfast cereals.
- ***Pulses:*** composition and nutritional value, processing, soaking, germination. Cooking and fermentations: Toxic constituents of pulses, Lathyrism.
- ***Nuts and oil seeds:*** Nutritive value, importance & classification.
- ***Milk and milk products:*** Composition of milk, properties and effect of heat, nutritional importance, milk processing, milk products.
- ***Flesh foods***: selection, storage, uses and nutritional aspects of meat, fish and poultry, spoilage of fish.
- ***Fruits and vegetables:*** Classifications, composition and importance in human nutrition storage, cooking of vegetables, changes during cooking, effect of heat.
- ***Sugar and Sugar products***
  - Form of sugar and liquid sweetness.
  - Caramelization, Hydrolysis, Crystallization
- ***Beverages:*** Coffee, tea, and cocoa, processing composition and preparation, spices and condiments, types and composition.
- Fats and oils: Types, role of fat in cookery.
- Egg - composition & classification of egg & egg products, its nutritive value.
- Baking - Types of bake products & its nutritive value.

**FOOD SCIENCE (PRACTICAL)**
**Course Code: CND.109P**
**Credit Hours: 1.5**

- Detection of toxins and adulterants of some of the common foods.
- Preparation of some confectionary products.
- Preparations of some traditional, fermented and other products.
- Survey of marketed processed and labeling of processed food items.
- Nutritional value & criteria of food selection in Indian diet according to ICMR.
- Visit to confectionaries.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**FAMILY MEAL MANAGEMENT (THEORY)**
**Course Code: CND.110T**
**Credit Hours: 3**
**Semester: II**

- Introduction to meal management - balanced diet, food groups, food exchange list & the planning of balance diet.
- Food guides for selecting adequate diet
- Indian meal patterns - vegetarian & non-vegetarian.
- Food faddism & the faulty food habits.
- Nutritive value of common Indian recepies.
- Nutrition in pregnancy - Physiological stages of pregnancy, nutritional requirements.
- Nutrition during lactation - Physiology of lactation, nutritional requirements.
- Nutrition during infancy - growth & development, nutritional requirements, breast feeding, infant formula, introduction of supplementary foods.
- Nutrition during early childhood (Toddler/Preschool)- Growth & nutrient need, nutrition related problems, feeding patterns.
- Nutrition of school children- Nutritional requirement, importance of snacks, school lunch.
- Nutrition during adolescence - Growth & nutrient needs, food choices, eating habits, factor influencing needs.
- Nutrition during adulthood - Nutritional requirements, feeding pattern.
- Geriatric nutrition : Factors affecting food intake and nutrient use, nutrient needs, nutrition related problems.

**FAMILY MEAL MANAGEMENT (PRACTICAL)**
**Course Code: CND.108P**
**Credit Hours: 1.5**

Planning, preparation and nutritional evaluation of diets in relation to activity levels and physiological state.

- Planning and preparation of a balanced diet for a pregnant woman.
- Planning and preparation of a balanced diet for a lactating woman.
- Preparation of weaning foods.
- Planning and preparation of a balanced diet for pre-school child.
- Balanced diet for school going child. Preparation of packed lunch.
- Planning and preparation of a balanced diet for adolescence.
- Planning of meals for adult belonging to different income group.
- Project work with proper diet plan based on survey.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | **Particulars** | **Marks** |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**APPLIED PHYSICS (THEORY)**
**Course Code: PMS.111T**
**Credit Hours: 3**
**Semester: II**

**Unit- I: Simple Machines (10 Lectures)**

- Machines and their principles, efficiency, mechanical advantage, lever pulley and axel.
- Working knowledge of household equipments like vacuum cleaner, hair dryer, food processor, washing machine, microwave oven and OTG's.

**Unit- II: Heating & Cooling Machines (8 Lectures)**

- Functioning, utility and maintenance of- Heater, Iron, Water Geysers, OTG and Induction cook top.
- Functioning, utility and maintenance of cooler, refrigerator, air conditioner and deep freezer.

**Unit –III: Light & Electricity (15 Lectures)**

- Light-Properties and transmission of light.
- Laws of reflection and refraction, Normal vision, defects of vision.
- Working of camera, microscope and Binoculars.
- Electricity-Transmission of electricity.
- Study of conductors, ammeter and voltmeter.
- Study of house wiring, earthing, transformer, adopter, plug, fuse, bulb, fluorescent tube.

**Unit- IV: Sound (12 Lectures)**

- Production & Reflection of sound measurement of noise, echo and its uses.
- Elementary knowledge of radio, television, telephone, microphone and loudspeaker.

**Unit- V: Consumer Awareness (5 Lectures)**

- Guarantee and warranty of all household equipments.
- Precautions while using equipments and servicing of equipment used.

**APPLIED PHYSICS (PRACTICAL)**
**Course Code: PMS.111P**
**Credit Hours: 1.5**

- Measurement of length and diameter with callipers.
- Determination of Refractive index of glass.
- Determination of Focal length of optical lenses.
- Verification of Ohm's law.
- Measurement of voltage of various household equipment's used.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | **Particulars** | **Marks** |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**APPLIED CHEMISTRY (THEORY)**
**Course Code: PMS.112T**
**Credit Hours: 3**
**Semester: II**

**Unit -I: Introduction** **(12 Lectures)**

- Branches of Chemistry, its terminology.
- Element, mixture, valency, compound, molar solution and equivalent weight.
- Atomic Structure of Electron, Proton and Neutron
- Atomic number, atomic weight and atomic structure of sodium, chlorine, copper.

**Unit- II: Acids, Base and Salts** **(12 Lectures)**

- Alkaloids- Function and Properties of Alkali.
- Uses and effects of Nicotine and Quinine.
- Types of Dyeing agents and their uses.

**Unit- III: Study of Drugs** **(12 Lectures)**

- Definition and function of Antibodies, Antiseptics, Analgesics, Sulpha-drugs, Insecticides and disinfectants.
- Fire extinguisher- use and maintenance.

**Unit- IV: Cosmetics** **(12 Lectures)**

- Composition, characteristics of cold and vanishing creams, lipsticks, nails paints, shampoo, suns creams and hair color, hair oil and dyes.
- Precautions while purchasing cosmetics and while using them.

**Unit –V : Paints and Vanishes** **(12 Lectures)**

- Composition and Types.
- Elementary knowledge of cement and glass.

**APPLIED CHEMISTRY (PRACTICAL)**
**Course Code: PMS.112P**
**Credit Hours: 1.5**

- Maintenance and handling of physical and chemical balance.
- Qualitative analysis of chloride, acetate, phosphate, sulphate, sulphide as acid radicals, basic radical as aluminum, chromium, zinc, copper, iron, nickel, lead.
- Determination of pH
- Qualitative analysis of preservative-nitrate, sulphites, salicylate, benzoate,

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | **Particulars** | **Marks** |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**BIOSTATISTICS & COMPUTER APPLICATIONS**
**Course Code: PMS.201T**
**Credit Hours: 2**
**Semester: III**

**SECTION-I: BIOSTATISTICS (15 Lectures)**

- Introduction to data and statistics
- Presentation of data:
  - Bar diagram
  - Histogram
  - Frequency polygon
  - Frequency curve, Cumulative frequency curve.
- Measure of central tendency:
  - Mean
  - Median
  - mode (individual, discrete and continuous data).
- Measure of variability:
  - Range
  - Standard deviation
  - Variance and coefficient of variation

**SECTION-II: COMPUTER APPLICATIONS (15 Lectures)**

- Computer: General Introduction, History of computer development and respective generation: Need to use computers, Applications in Laboratory and in general.
- Input and Output Device
- Memory
- Personal Computer
- Data Representation and Number System
- Software
- Data Communication
- Internet, Cyber etiquette
- Microsoft Office: PowerPoint Presentations, Microsoft word, excel sheet

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

**NUTRITIONAL BIOCHEMISTRY (THEORY)**
**Course Code: BIO.202T**
**Credit Hours: 4**
**Semester: III**

**- Basics of Energy Metabolism, Nutrition & Dietetics**
Unit of measuring energy, calorific value of food, BMR & factors affecting it, SDA of food, calculation of energy requirement, balanced diet, nutrition in health & diseases (protein energy malnutrition).

**- Carbohydrate Metabolism**
Introduction, definition, classification, biomedical importance. Brief outline of metabolism: Glycogenesis & glycogenolysis (in brief), Glycolysis, citric acid cycle & its significance, HMP shunt & Gluconeogenesis (in brief)

- **Protein metabolism**
Introduction, classification, urea cycle

**- Amino Acids**
Definition, classification, essential & non-essential amino acids

**- Lipid Metabolism**
**Digestion, absorption, transport of fatty acids, ketogenesis, biosynthesis of fatty acids mobilization of fats(lipolysis) , metabolism of phospholipids and cholesterol**

**- Enzymes**
Introduction, definition, classification, factor affecting enzyme activity

**- Vitamins**
Water & fat soluble vitamins, sources, requirement, deficiency disorders & biochemical functions.

**- Water and Electrolyte Balance**

**NUTRITIONAL BIOCHEMISTRY (PRACTICAL)**
**Course Code: BIO.202P**
**Credit Hours: 2**

- Identification of carbohydrates (Qualitative Tests)
- Identification of proteins (Qualitative Tests)
- Estimation of glucose in urine by Benedict's methods.
- Blood glucose estimation.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | **Particulars** | **Marks** |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**FOOD MICROBIOLOGY (THEORY)**
**Course Code: PMS.203T**
**Credit Hours: 3**
**Semester: III**

- Introduction of microbiology and its relevance to everyday life. General characteristics of bacteria, fungi, virus, protozoa, and algae.
- Growth of microorganisms: Growth curve, effect of environmental factors in growth of microorganism - pH , water activity , oxygen availability, temperature and others.
- Microbiology of deficient food: Spoilage. contamination sources, types, effect on the following :
  - Cereal and cereal products
  - Sugar and sugar products.
  - Vegetables and fruits
  - Meat and meat products.
  - Fish, egg and poultry, Milk and milk products
  - Canned foods.
- food microbiology:
  - food born infection
  - Food born intoxication
  - food born toxic infection
- Beneficial effect of microorganisms.
- Waste product handling : -
  - Planning for waste disposal.
  - Solid wastes and liquid wastes.
- Hygiene and sanitation of food safety

**FOOD MICROBIOLOGY (PRACTICAL)**
**Course Code: PMS.203P**
**Credit Hours: 1.5**

- Study of equipments in a microbiology lab.
- Preparation of laboratory media and special media, cultivation of bacteria, yeasts and moulds.
- Staining of bacteria: gram-staining.
- Cultivation and identifications of important molds and yeast in food items.
- Demonstration of available rapid methods and diagnostic kits used in identification of microorganisms or their products.
- Visits (at least two) to food processing units or any other organization dealing with advanced methods in food microbiology.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | **Particulars** | **Marks** |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**BASIC DIETETICS (THEORY)**
**Course Code: CND.204T**
**Credit Hours: 4**
**Semester: III**

- Role of dietarian : The hospital & community.
- Basic concepts of diet therapy.
- Principles of diet therapy & therapeutic nutrition for changing needs.
- Routine hospital diets - Regular diet, light diet, full liquid and tube feeding.
- Diets for gastro - intestinal disorders, constipation, diarrhoea, peptic ulcer.
- Diet for renal diseases - Nephritis, Nephrotic syndrome and renal failure.
- Diet for Diabetes mellitus.
- Nutrition in cancer.
- Feeding the patients - Psychology of feeding the patient, assessment of patient needs.
- Feeding infants & children - problems in feeding children in hospitals.
- Nutrition & diet clinics - Patients checkup and dietary counseling, educating the patient and follow up .

**BASIC DIETETICS (PRACTICAL)**
**Course Code: CND.204P**
**Credit Hours: 2**

- Standardization of common food preparations.
- Planning, preparation and calculation of following diets :Normal diet,Liquid diet, Soft diet, High and low caloric diet, Bland diet for peptic ulcer, Diet for Viral hepatitis and cirrhosis, Diet for Diabetes mellitus, Diet for Hypertension and Atherosclerosis, Diet for Nephritis and Nephrotic syndrome
- Low and medium cost diets for P.E.M., Anemia & vitamin A deficiency.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**MATERNAL & CHILD NUTRITION (THEORY)**
**Course Code: CND.205T**
**Credit Hours: 3**
**Semester: III**

**UNIT - I** **(15 Lectures)**

Nutrition during Pregnancy Nutritional requirement during pregnancy and modification of existing diet and supplementation. Common problems of pregnancy and their management vomiting and nausea, pica, pregnancy induced hypertension, obesity, diabetes.

**UNIT - II** **(15 Lectures)**

Nutrition during Lactation. Nutritional requirement during Lactation & dietary management and food supplements.

**UNIT – III** **(10 Lectures)**

Nutrition during Infancy Introduction of complementary feeding Initiation and management of Weaving.

**UNIT - IV** **(5 Lectures)**

Dietary Management of Children during diarrhea and fever.

**UNIT- V** **(5 Lectures)**

Nutrition and Health care program for mother and child.
Immunization Schedule for Infant and Children.

**MATERNAL & CHILD NUTRITION (PRACTICAL)**
**Course Code: CND.205P**
**Credit Hours: 1.5**

- Conducted as per theory syllabus

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**ADVANCED DIETETICS (THEORY)**
**Course Code: CND.206T**
**Credit Hours: 4**
**Semester: IV**

- Concept of Diet therapy : principles of therapeutic diets, modification of normal diet, classification of therapeutic diets.
- Role of Dietician in hospital service, hospital dietary service
- Routine hospital diets: study of hospital diet. Basic concepts and methods of -
  - Oral feeding
  - Tube feeding
  - Parental nutrition
  - Intravenous feeding.
- Obesity :- causes, complication and health effects, dietary recommendation. .
- Diet in gastritits, peptic ulcer- symptoms, clinical findings, treatment, dietary modification, adequate nutrition, amount of food, and intervals of feeding, Chemically and mechanically irrigating foods.
  - Diarrhoea- (child and adult)- classification, modification of diet , fibre, residue. Fluids & nutritional adequacy.
  - Constipation- flatulence - dietary considerations.
- Diet in diseases of the liver
  - Etiology, symptoms and dietary treatment in - Jaundice, hepatitis, cirrhosis and hepatic coma.
  - Role of alcohol in liver diseases.
- Gout- Nature and occurrence of uric acid, causes, symptoms and diet.
- Diet in Diabetes mellitus:
  - Symptoms-types and tests for detection.
  - Dietary treatment
- Diet in Cardiovascular diseases:
  - Role of nutrition in cardiac efficiency, incidence of Atherosclerosis, dietary principles, Hyperlipidenmia, Hypertension- causes and dietary treatment, Sodium restricted diet, level of sodium restriction, sources of sodium, danger of severe sodium restriction.

**ADVANCED DIETETICS (PRACTICAL)**
**Course Code: CND.206P**
**Credit Hours: 2**

- Planning, preparations and calculations Diet for Diarrhea and constipation, Diet for peptic ulcer, Diet tor liver disease.
- Planning, preparation and calculation of diets for insulin dependent Diabetes mellitus. Planning, snacks, desserts and beverages for diabetes.
- Planning, preparation and calculation of diet in cardiovascular diseases.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | **Particulars** | **Marks** |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**SANITATION AND HYGIENE (THEORY)**
**Course Code: CND.207T**
**Credit Hours: 3**
**Semester: IV**

**Unit- I: Health** **(5 Lectures)**

- Concept of positive health, good health, mental health, school health.
- Factors affecting health

**Unit-II: Hygiene** **(10 Lectures)**

- Health Hazards of industrial worker and safety measures.

**Unit-III: Infection Diseases** **(15 Lectures)**

- Water, food borne diseases- cholera, dysentery, tuberculosis, hepatitis, diarrhoea.
- Air borne and viral infection- influenza, cold, pneumonia, polio, measles, mumps.
- Direct contact through cuts and abrasions, conjunctivitis, tetanus.

**Unit-IV: Food Sanitation** **(5 Lectures)**

- Control and inspection
- Planning and implementation of training program for health personal.

**Unit- V: Public Health Organization** **(15 Lectures)**

- W.H.O., central and state health activities, immunization programmes (Triple vaccine –smallpox, polio, typhoid, cholera, tuberculosis, AIDS and hepatitis)

**SANITATION AND HYGIENE (PRACTICAL)**
**Course Code: CND.207P**
**Credit Hours: 1.5**

- Conducted as per theory syllabus

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**COMMUNITY NUTRITION (THEORY)**
**Course Code: CND.208T**
**Credit Hours: 4**
**Semester: IV**

- Nutrition and health in National development.
- Malnutrition- meaning. factors contributing to malnutrition, over nutrition.
- Nutritional disorders- Epidemiology, clinical features, prevention and dietary treatment for Protein Energy malnutrition, nutritional anaemias & vitamin deficiency disorders .
- Methods of assessing nutritional status:
  - Sampling techniques , Identifications of risk groups,
  - Direct assessment - Diet surveys, anthropometric, clinical and biochemical estimation.
  - Indirect assessment- Food balance sheet, ecological parameters and vital statistics.
- Improvement of nutrition of a community:
  - Modern methods of improvement or nutritional quality of food, food fortification, enrichment and nutrient supplementations.
  - Nutrition education themes and messages in nutrition and health, Antenatal and postnatal care.
- Nutritional and infection relationship : Immunization and its importance, Food borne infection and intoxication diseases, foods involved, methods of prevention, Infestation of food borne diseases , Outbreak, Prevention signs and control of infection.

**COMMUNITY NUTRITION (PRACTICAL)**
**Course Code: CND.208P**
**Credit Hours: 2**
**Semester: IV**

- Diet and nutrition surveys:
  - Identification of vulnerable and risk groups.
  - Use of anthropometric measurement in children.
- Field visit to
  - Observe the working of nutrition and health oriented programmes (survey based result).
  - Hospitals to observe nutritional deficiencies.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**FOOD PRESERVATION AND PROTECTION (THEORY)**
**Course Code: CND.209T**
**Credit Hours: 3**
**Semester: IV**

**UNIT- I** **(10 Lectures)**

- Food Spoilage – its causes
- Perishable, semi perishable and non perishable foods.
- Factors affecting the growth of micro-organisms in the food.

**UNIT- II** **(15 Lectures)**

- Food Preservation
- Importance and principles of food preservation
- Methods of food preservation.
- Use of low temperature( Refrigeration and freezing)
- Use of high temperature( Pasteurization and sterilization)
- Use of preservatives.
- Drying.

**UNIT- III** **(8 Lectures)**

- Food Fermentation
- Microorganisms as food-SCP ( Single cell Protein)
- Food Adulteration and its household methods of detection.

**UNIT- IV** **(9 Lectures)**

- Food Additives – definition and classification.
- Natural and synthetic preservatives.

**UNIT- V** **(8 Lectures)**

- Food Laws and Standards.

**FOOD PRESERVATION AND PROTECTION (PRACTICAL)**
**Course Code: CND.209P**
**Credit Hours: 1.5**

- Preparation of jams, jellies, marmalades, murrabbas, pickles, chutneys.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | **Particulars** | **Marks** |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**COMMUNITY HEALTH**
**Course Code: PMS.210T**
**Credit Hours: 2**
**Semester: IV**

- General concepts of health and diseases with reference to natural history of disease with pre-pathogenic and pathogenic phase. The role of socio-economic and cultural environment in health and diseases-Epidemiology and scope. **(3 Lectures)**
- Public health administration-An overall view of the health Administration set up at centre and state level. **(3 Lectures)**
- The National Health Programmes- National Health programmes including tuberculosis, malaria, MCH and HIV/AIDS. **(3 Lectures)**
- Health problems in vulnerable groups-Pregnant and lactating women and infants and school going children-occupational groups, geriatrics. **(3 Lectures)**
- Occupational Health- Definition, scope-Occupational diseases, prevention of occupational diseases and hazards. **(3 Lectures)**
- Social security and other measures for the protection of occupational hazards, accidents and disease. Details of compensation acts. **(3 Lectures)**
- Family planning objectives of National family planning methods. A general idea of advantages and disadvantages of the method. **(3 Lectures)**
- Mental Health- community aspects of mental health; role of physiotherapists, therapists in mental health problems such as mental retardation etc. **(3 Lectures)**
- Communicable disease-An overall view of the communicable disease. Classification according to the principal mode of transmission. Role of insects and their vectors. **(3 Lectures)**
- International health agencies. **(3 Lectures)**

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

**NUTRITION**
**Course Code: PMS.211T**
**Credit Hours: 2**
**Semester: IV**

- Introduction to science of nutrition
- Food pattern and its relation to health **(2 Lectures)**
- Factors influencing food habits, selection and food stuffs **(3 Lectures)**
- Food selection, storage & preservation **(3 Lectures)**
- Classification of nutrients – macronutrients and micronutrients **(3 Lectures)**
- Proteins – types, sources requirements and deficiencies of proteins **(3 Lectures)**
- Carbohydrates sources, requirements & efficiency **(3 Lectures)**
- Fats – types, sources, requirements, deficiency and excess of fats **(3 Lectures)**
- Water – sources of drinking water, requirements, preservation of water **(2 Lectures)**
- Minerals – types, sources, requirements deficiencies of minerals **(3 Lectures)**
- Vitamins – types, sources, requirements deficiencies of vitamins **(3 Lectures)**
- Planning diets including renal diets **(2 Lectures)**

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

**OCCUPATIONAL SAFETY & HEALTH**
**Course Code: PMS.212T**
**Credit Hours: 2**
**Semester: IV**

**UNIT - I : Safety and Health Management (4 Lectures)**

i. Occupational Health Hazards, Promoting Safety, Safety and Health training, Stress and Safety.

ii. Ergonomics - Introduction, Definition, Objectives, Advantages.

Ergonomics Hazards - Musculoskeletal Disorders and Cumulative Trauma Disorders.

- Organizing for safety, Health and Environment.
- Organization: Structure, Function and responsibilities
- Safety Committee: Structure and function

**UNIT - II : Radiation and Industrial Hazards (5 Lectures)**

i. Types and effects of radiation on human body, Measurement and detection of radiation intensity. Effects of radiation on human body, Measurement – disposal of radioactive waste, Control of radiation

ii. Industrial noise -Sources, and its control, Effects of noise on the auditory system and health, Measurement of noise ,

iii. Different air pollutants in industries, Effect of different gases and particulate matter ,acid fumes , smoke, fog on human health

iv. Vibration - effects, measurement and control measures

v. Industrial Hygiene.

**UNIT –III: Electrical Hazards (5 Lectures)**

Safe limits of amperages, voltages, distance from lines, etc., Joints and connections, Overload and Short circuit protection, Earthing standards and earth fault protection , Protection against voltage fluctuations, Effects of shock on human body Hazards from Borrowed nutrals, Electrical equipment in hazardous atmosphere, Criteria in their selection, installation, maintenance and use, Control of hazards due to static electricity,

**UNIT – IV : Fire and Other Hazards (3 Lectures)**

i. General causes and classification of fire, Detection of fire, extinguishing methods, fire fighting installations with and without water.

ii. Machine guards and its types, automation. High pressure hazards, safety, emptying, inspecting, repairing, hydraulic and nondestructive testing, hazards and control in mines.

**UNIT –V: Vibration and Noise (3 Lectures)**

Activities related to vibrations, its impact on human health, abatement Sources, effects of noise on man, Measurement and evaluation of noise, Silencers, Practical aspects of control of noise

**UNIT-VI: Theories & Principles of Accident Causation & Prevention (5 Lectures)**

i. The effect of accident, unsafe act, unsafe condition, unpredictable performance, Human factors contributing to accidents - causes for unsafe acts,

ii. Safety and psychology -Theories of motivation and their application to safety. Consequences of accident, accident prevention programmers, Role of safety

Incident, accident, injury, dangerous occurrences, unsafe acts, unsafe conditions, hazards, error, oversight, mistakes, etc.

*Accident Prevention :* Theories / Models of accident occurrences, Principles of accident prevention, Accident and Financial implications.

**UNIT-VII: First Aid** **(5 Lectures)**

i. Body structure and Functions, Position of causality, the unconscious casualty, fracture and dislocation, Injuries in muscles and joints, Bleeding, Burns, Scalds and accidents caused by electricity, Respiratory problems, Rescue and Transport of Casualty. Cardiac massage, poisoning, wounds.

ii. Personal Protective Equipments: Need, selection, supply, use, care and maintenance, Personal protective devices for head, ear, face, eye, foot, knee and body protection, Respiratory personal protective devices.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

**DIETETICS AND COUNSELING (THEORY)**
**Course Code: CND.301T**
**Credit Hours: 4**
**Semester: V**

- Practical consideration in giving dietary advice and counselling -
  - Factors affecting and individual food choice.
  - Communication of dietary advice
  - consideration of behaviour modification
  - motivation

- counseling and educating patient
  - Introduction to nutrition counseling
  - Determining the role of nutrition counseling
  - Responsibility of nutrition counselor
  - practitioner vs client managed care
  - conceptualizing entrepreneurs skills and behaviour
  - communication and negotiation skills

- Teaching aids used by dietician - charts, leaflets, posters etc. preparation of teaching material for patients suffering from digestive disorder, Hypertension, Diabetes, Atherosclerosis, Hepatitis and cirrhosis

**DIETETICS AND COUNSELING (PRACTICAL)**
**Course Code: CND.301P**
**Credit Hours: 2**

- Project planning for any one disease.
- Preparations of teaching aids in the field of nutrition.
- Preparation of case history of a patient and feeding of information in the hard disc.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**CLINICAL NUTRITION & NUTRITIONAL ASSESSMENT (THEORY)**
**Course Code: CND.302T**
**Credit Hours: 4**
**Semester: V**

**Section-I: Clinical Nutrition (30 Lectures)**

- Carbohydrates – review of digestion, absorption and metabolism of
- Carbohydrates, storage and utilization of carbohydrates as energy source for physical activity.
- Lipids – Review of digestion, absorption and metabolism of fats and fatty acids, energy yield from dietary fats,storage and mobilization of fat stores during exercise, production of ketone bodies.
- Energy Metabolism – BMR, energy requirement for physical activity, relative body weight and influence of physical exercise on changes in body fat & body composition.
- Water and electrolyte balance
- Nutrient and drug interactions – effect of drug therapy on intake.
- Methods of assessment of nutritional status.

**Section-II: Nutritional Assessment (30 Lectures)**

- Nutritional status assessment – meaning, need, objective
- Diet Surveys
- Clinical signs – Indentifying signs of PEM, Vit. A, Iodine, Iron deficiency Interpretation of descriptive list of clinical signs.
- Nutritional Anthropometry
- V Biochemical Assessment

**CLINICAL NUTRITION & NUTRITIONAL ASSESSMENT (PRACTICAL)**
**Course Code: CND.302P**
**Credit Hours: 2**

- Taking Anthropometric measurements.
- Formulation of questionnaire.
- Observation of Clinical signs.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | **Particulars** | **Marks** |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**FOOD TOXICOLOGY AND FOOD ADULTERATION (THEORY)**
**Course Code: CND.303T**
**Credit Hours: 4**
**Semester: V**

- Naturally occurring toxins in various foods.
- Residual chemicals utilized in food production & processing – chemicals preservations, pesticides, heavy metals.
- Food Adulteration – Composition and quality criteria, health hazards for the following:
  - Milk and milk products
  - Oil and fats
  - Spices and condiments
  - Food grains
  - Flours
  - Canned foods
  - Fruits and vegetable products
  - Sugar and preserves
  - Beverages
- Substances intentionally added to foods
  - Antioxidants
  - Colors
  - Stabilizers and heavy metals.

**FOOD TOXICOLOGY AND FOOD ADULTERATION (PRACTICAL)**
**Course Code: CND.303P**
**Credit Hours: 2**

-Conducted as per theory syllabus

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

***SCHEME OF EXAMINATION - PRACTICALS***

| | Particulars | Marks |
|---|---|---|
| **INTERNAL** | Log Book | 10 |
| | Clinical Posting(attendance) | 20 |
| | Internal (1st ,2nd Hourly & mid-term) | 20 |
| **EXTERNAL** | Viva-voce | 50 |
| | **TOTAL MARKS** | **100** |

**HEALTHCARE**
**Course Code: PMS.305T**
**Credit Hours: 2**
**Semester: V**

**UNIT-I: Introduction to Health (10 Lectures)**

- Definition of health, determinants of health, health indicators of India, health team concept.
- National health policy
- National health programmes (Briefly objectives and scope)
- Population of India and family welfare programme in India

**UNIT-II: Introduction to Nursing (15 Lectures)**

- What is nursing? Nursing principles, inter-personnel relationships.
- *Bandaging:* basic turns, bandaging extremities, triangular bandages and their application.
- Nursing position, prone, lateral, dorsal, dorsal recumbent, Fowler's positions, comfort measures, bed making, rest and sleep.
- *Lifting and transporting patients:* lifting patients up in the bed, transferring from bed to wheel chair, transferring from bed to stretcher.
- Bed side management: giving and taking bed pan, urinal.
- Observation of stools, urine, sputum
- Use and care of catheters, enema giving.
- *Methods of giving nourishment:* feeding, tube feeding, drips, transfusion.
- Recording of body temperature, respiration and pulse.
- Simple aseptic techniques, sterilization and disinfection.
- *Surgical dressing:* observation of dressing procedures.

**UNIT-III: First Aid (15 Lectures)**

- Physical Exam and SAMPLE History
- Documentation and Legal Considerations
- Sudden Illness, Bleeding
- Caring for Shock, Burns, Injuries to muscles, bones, and joints, Splints, Bites and Stings
- Administering Epinephrine
- Assisting with bronchodilators (inhalers)
- Heat/Cold Related Emergencies
- In-line stabilization for head, neck and back injuries
- First Aid Kits, Fire & safety

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |

**DIETARY MANAGEMENT OF COMMON DISEASES**
**Course Code: PMS.306T**
**Credit Hours: 2**
**Semester: V**

**UNIT – I** **(10 Lectures)**

- Diet Therapy: Routine hospital diet, Regular diet, Light diet, Soft Diet, Full liquid diet.
- Diet in fevers and infections – Typhoid, Malaria and Tuberculosis.
- Diet in gastro intestinal disorders: Diarrhoea, Constipation, Peptic ulcer

**UNIT – II** **(20 Lectures)**

- Diet in Diabetes mellitus – Classification, predisposing factors, Diagnosis, Dietary management.
- Diet in Cardiovascular diseases – Dietary management in atherosclerosis and hypertension.
- Diet in diseases of liver and gall bladder.
- Diet in Renal diseases
- Dietary Management in glomerulonephritis
- Dietary Management in Acute and chronic renal failure.

***SCHEME OF EXAMINATION - THEORY***

| Types of Questions | Total No. of Questions | No. of Questions to be attempted | Marks Assigned | Subtotal |
|---|---|---|---|---|
| **SEC -A**: MCQ'S | 10 | 10 | 1 | 10 |
| **SEC -B**: Very Short Answer Questions | 7 | 5 | 2 | 10 |
| **SEC -C:** Short Answer Questions | 6 | 4 | 5 | 20 |
| **SEC -D**: Long Answer Questions | 2 | 1 | 10 | 10 |
| | | | **TOTAL MARKS** | **50** |