ELEMENTARY PHYSICS & CHEMISTRY (THEORY)
Course Code: PMS.001T
Credit Hours: 3
Semester: I

SECTION I: ELEMENTARY PHYSICS

UNIT – I: PHYSICAL WORLD
Different System of Units (CGS and SI)
Fundamental Quantity
SI Units
UNIT - II: MATTER AND ITS NATURE BEHAVIOUR
Matter – Solid, Liquid and Gas; Characteristics
Change in state of matter: Evaporation, condensation and sublimation
UNIT –III: MOTION
Rest and Motion
Speed and Velocity
Acceleration
UNIT – IV: FORCE AND LAWS OF MOTION
Balanced and unbalanced Force
First law of Motion
Second law of motion
Third Law of Motion
UNIT –V: OPTICS
Reflection of light
Refraction of light
Image formations (By mirror and lens)
Magnification, Power of a lens
Refraction and dispersion of light through a prism.
Scattering of light – blue color of the sky and reddish appearance of the sun at sunrise and sunset
UNIT – VI: ATOM AND NUCLEI
Composition and size of nucleus, atomic masses, isotopes, isobars; isotones.
Radioactivity – alpha, beta and gamma particles/rays and their properties
Applications of radioactivity.
Electromagnetic Waves.

SECTION II: ELEMENTARY CHEMISTRY

UNIT – I: SOME BASIC CONCEPTS OF CHEMISTRY

General Introduction: Importance and scope of chemistry.

Elements, Compounds, Mixture: Heterogeneous and homogenous

UNIT –II: STRUCTURE OF ATOM

Thompson Model & its Limitation

Rutherford's model & Its limitation

Bohr's Model & Its Limitation

Dalton's Atomic Theory

Concept of Shells and subshells & Orbital Rule

UNIT – III: MODERN PERIODIC TABLE

Significance & Classification upto 20 elements (Periodic Table)

Atomic Number, Valency & Electronic configuration, Atomic & molecular masses

Laws of Chemical Combination, atoms and molecules.

UNIT –IV: ACID, BASE AND SALT

Definitions and General Properties

Concept of pH and its importance in everyday life

UNIT – V: CHEMISTRY IN EVERYDAY LIFE

Chemicals in medicines – analgesics, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines.

Chemicals in food – preservatives, artificial sweetening agents, elementary idea of antioxidants.

Cleansing agents – soaps and detergents, cleansing action.

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

HUMAN ANATOMY & PHYSIOLOGY (THEORY)
Course Code: PMS.002T
Credit Hours: 3
Semester: I

UNIT -I
Skin & sense organs- Eye, Ear, Nose, Tongue(taste buds).

UNIT - VI
Digestive system- Parts of gastrointestinal tract and associated glands. Digestion and absorption of food

UNIT -VII
Respiratory system- Parts of respiratory system. Functions of lungs, mechanism of breathing & exchange of gases in the lungs, Lung Capacity

UNIT -VIII
Urinary system- Parts of urinary system. Structure and function of kidney and urinary bladder, Mechanism of Urine Formation

UNIT - V
Circulatory system- Structure of heart, function of heart and blood vessels, Brief introduction of heart rate, Pulse rate, Blood Pressure

UNIT – X
Nervous system- Parts of Brain, Cerebrospinal Fluid (C.S.F), spinal cord. Neurons & its functions, functions of CNS, ANS,

UNIT - III
Skeletal system-Structure of Bones, Bones of cranium, face, vertebral column, Upper & lower limbs, fracture of bones, movements of joints.
Muscular System- Structure and types of muscles.

UNIT - IV
Reproductive system- Brief introduction of male & female reproductive organs and associated hormones.

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

INTRODUCTION TO DIALYSIS TECHNOLOGY (THEORY)
Course Code: MED.003T
Credit Hours: 3
Semester: I

UNIT- I

History & Types of Dialysis

Genesis of dialysis, invention and the process involved in the evolution of dialysis. Types of dialysis Introduction to Continuous renal replacement therapy (CRRT)

UNIT- II

Principles of Dialysis, quantification of adequacy

Principles of diffusion, filtration, ultra-filtration, convection, and osmosis. Solute transport and fluid movement during dialysis. Hemodialysis & Peritoneal Dialysis.

Screening the patient

UNIT-III

Dialysis reuse

History of dialyzer reprocessing. Reason for dialysis reprocessing. Steps involved in dialyzer reprocessing. Hazards of dialyzer reprocessing.

UNIT - IV

Dialyzer Membranes

Introduction to dialyzer membranes. Composition of the dialyzer membranes, types its use
and sizes of the various membranes.

UNIT-V

Preparation & assessment of the dialysis equipments

Complications in dialysis patients

Vascular Access – Temporary & Permanent

Types of vascular access – Fistulae, Grafts, Catheters. Methods of needle insertion for AVFs and grafts.

INTRODUCTION TO DIALYSIS TECHNOLOGY (PRACTICAL)
Course Code: MED.003P
Credit Hours: 2

- Demonstration of various equipments & procedure of dialysis treatment
- Demonstration of assessment & management of patient for dialysis Treatment

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

SCHEME OF EXAMINATION - PRACTICALS

S. No.	Particulars	Marks
1	Log Book	5
2	Attendance	10
3	Internal (1^{st} ,2^{nd} Hourly & Mid-term)	10
4	Viva-voce	25
	TOTAL MARKS	**50**

APPLIED DAILYSIS TECHNOLOGY-I (THEORY)
Course Code: MED.004T
Credit Hours: 3
Semester: I

- History, types & principles of dialysis.
- Dynamics of Dialysis: diffusion, osmosis, ultra-filtration & solvent drag.
- Haemodialysis apparatus: types of dialyser & membrane, dialysate.
- Dialysis Machines and their functioning
- Anticoagulants
- Dialyser
- Acute and Chronic dialysis

APPLIED DAILYSIS TECHNOLOGY-I (PRACTICAL)
Course Code: MED.004P
Credit Hours: 2

- Demonstration of equipment preparation in Dialysis Treatment
- Demonstration of techniques of Dialysis as per the theory syllabus

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

SCHEME OF EXAMINATION - PRACTICALS

S. No.	Particulars	Marks
1	Log Book	5
2	Attendance	10
3	Internal (1st ,2nd Hourly & Mid-term)	10
4	Viva-voce	25
	TOTAL MARKS	**50**

CLINICAL HEMATOLOGY & BLOOD BANKING (THEORY)
Course Code: PMS.005T
Credit Hours: 3
Semester: I

UNIT – I: BLOOD
Hematopoiesis**:** origin and developments of cells
Composition & various components.
Types & functions of various blood cells
UNIT- II: HAEMOGLOBIN
Structure of hemoglobin
Types of Hb
Function of Hemoglobin
UNIT- III: BLOOD BANKING:
Introduction
Blood Groups
Techniques of blood grouping: - ABO Grouping, RH blood Grouping,
Blood Transfusion: Technique and Reactions
Selection of Donors & Collection of Blood, Anticoagulants, Transport & Storage
Centrifuge/Technique and uses
UNIT- IV: DISORDERS OF BLOOD
Anemia and its types
Hemophilia

CLINICAL HEMATOLOGY & BLOOD BANKING (PRACTICAL)
Course Code: PMS.005P
Credit Hours: 2

- Collection of Blood (capillary/vein puncture)
- Preservation & transport of blood

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

SCHEME OF EXAMINATION - PRACTICALS

S. No.	Particulars	Marks
1	Log Book	5
2	Attendance	10
3	Internal (1st ,2nd Hourly & Mid-term)	10
4	Viva-voce	25
	TOTAL MARKS	**50**

ELEMENTARY BIOLOGY (THEORY)
Course Code: PMS.006T
Credit Hours: 2
Semester: I

UNIT – I: BIODIVERSITY

Need for classification, Characteristics of Life

Levels of Organization for Living things, Binomial Nomenclature

Tools for study of Taxonomy: Museums, Zoos, Herberia, Botanical Gardens

Five Kingdom Classification - Salient features

UNIT – III : HUMAN PHYSIOLOGY

Digestion and absorption:

Alimentary canal and digestive glands; Role of digestive enzymes and gastrointestinal hormones; Peristalsis, digestion, absorption and assimilation of proteins, carbohydrates and fats;

Calorific value of proteins, carbohydrates and fats , Egestion.

Breathing and Respiration: Respiratory organs, Mechanism of breathing and its regulation in humans– Exchange of gases, transport of gases and regulation of respiration Body fluids and circulation.

Blood: Composition of blood, blood groups, coagulation of blood; Composition of lymph and its function;

Human circulatory system– Structure of human heart and blood vessels; Cardiac cycle, cardiac output, ECG; Double circulation

Excretory products and their elimination, Modes of excretion – Ammonotelism, ureotelism, uricotelism;

Human excretory system–structure and function; Urine formation, Osmoregulation; Regulation of kidney function– Renin-angiotensin, Atrial Natriuretic Factor, ADH and Diabetes insipidus

Locomotion and Movement: Types of movement – ciliary, flagellar, muscular;

Skeletal muscle – contractile proteins and muscle contraction; Skeletal system and its function

Neural control and coordination:

Neuron and nerves; Nervous system in humans– central nervous system, peripheral nervous system and visceral nervous system; Generation and conduction of nerve impulse; Reflex action.

Chemical coordination and regulation: Endocrine glands and hormones; Human endocrine system-Hypothalamus, Pituitary, Pineal, Thyroid, Parathyroid, Adrenal, Pancreas, Gonads; Mechanism of hormone action (Elementary Idea); Role of hormones as messengers and regulators, Hypo-and hyperactivity and related disorders

UNIT - V: ECOLOGY & ECOSYSTEM

Organism & Environment: Habitat & Niche

Population Interaction: Mutualism, Competition, Predation & Parasitism

Population Attributes: Growth Rate, Birth Rate, Death Rate

Ecosystem: Patterns, Components; Productivity& Decomposition; Energy Flow; Pyramids of number, Biomass, energy

Nutrient Cycling: Carbon, Phosphorus, Nitrogen

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

INTRODUCTORY BIOLOGY (THEORY)
Course Code: PMS.007T
Credit Hours: 2
Semester: I

UNIT-I: LIVING WORLD

- Introduction to Biology
- Branches of Biology:- Anatomy, Biochemistry, Physiology, Biophysics, Biotechnology, Botany, Cell Biology , , Epidemiology, Genetics, Histology, Homology, Microbiology, Pathology, Parasitological, Pharmacology, Physiology, Virology, Zoology, Molecular Biology, Mycology, Neurobiology, Developmental Biology.
- Scope of Biology & Career Options.
- Characteristics of Living Organisms: Elementary area of Metabolism, Transfer of energy at molecular levels, Open & Closer system, Homoeostasis, Growth & Reproduction, Adaptation Survival & Death

UNIT –II: CELL AS A BASIC UNIT OF LIFE

Cell Theory

- Difference b/w Prokaryotic cell and Eukaryotic Cell
- Brief Introduction to the cell Organelles and their functions

UNIT –IV: CELL DIVISION

Brief Introduction

- Mitosis
- Meiosis

UNIT – V: MOLECULES OF CELL

- Carbohydrates: Classification& Functions
- Amino Acids(only names):Classification & Functions
- Proteins: Classification, structure & functions
- Lipids: Classification & Functions
- Enzymes: Classification, Properties & functions
- Vitamins: Classification
- Nucleic Acid: Types

UNIT – VI: GENETICS

DNA:

DNA as a genetic material

- Chemical properties of DNA
- Nitrogenous Bases(Purines and Pyrimidines)
- Watson & Crick Model of DNA
- Chargaff Rule

RNA:

- Types and their functions

- Difference between DNA & RNA
- Brief introduction to Transduction and Translation

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

ENVIRONMENTAL STUDIES (THEORY)
Course Code: PMS.008T
Credit Hours: 2
Semester: II

UNIT-I : NATURAL RESOURCES

Renewable and non-renewable resources: Natural resources and associated problems.

- Forest resources ,
- Water resources
- Mineral resources
- Food resources
- Energy resources

UNIT-II : ECOSYSTEMS

- Concept of ecosystems, Structure and function of an ecosystem.
- Producers, consumers and decomposers.
- Energy flow in the ecosystem.
- Food chains, food webs and ecological pyramids.

UNIT-III: ENVIRONMENTAL POLLUTION

- *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.

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

APPLIED DIALYSIS TECHNOLOGY-II (THEORY)
Course Code: MED.009T
Credit Hours: 3
Semester: II

- *Dialysis in special situations:*
  Patients with congestive cardiac failure.
  Advanced liver disease.
  Failed transplant.
  Poisoning cases.
- *Special dialysis procedures:*
  Continuous therapies in hemodialysis.
  Different modalities of peritoneal dialysis.
  Hemodiafiltration.
  Hemoperfusion.
  Special problems in dialysis patients:
  - Psychology & rehabilitation.
  - Diabetes
  - Hypertension.
  - Infections.
  - Bone diseases.

  Dietary management for dialysis patient

APPLIED DIALYSIS TECHNOLOGY-II (PRACTICAL)
Course Code: MED.009P
Credit Hours: 2

- Demonstration of techniques of Haemodialysis
- Demonstration of patient preparation, management of patient before during & after the dialysis treatment
- Demonstration of management of complications due to dialysis treatment

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

SCHEME OF EXAMINATION - PRACTICALS

S. No.	Particulars	Marks
1	Log Book	5
2	Attendance	10
3	Internal (1^{st} ,2^{nd} Hourly & Mid-term)	10
4	Viva-voce	25
	TOTAL MARKS	**50**

DIALYSIS EQUIPMENTS, ACCESSORIES AND FUNCTIONS (THEORY)
Course Code: MED.010T
Credit Hours: 3
Semester: II

UNIT- I

Types of equipment used in the dialysis process.

Parts of a dialysis machine, tubings and the water supply for dialysis.

Overview of the various equipment, accessories and working of a dialysis machine-The technology, functioning. Sterilization of dialysis machine.

UNIT- II

Computer applications in Dialysis: Hospital information system in the dialysis UNIT. Scheduling of procedures, application of computers in the monitoring and maintenance of a dialysis UNIT

UNIT - III

Dialysate delivery system : Definition of a delivery system, types of delivery systems. Composition of dialysate ,Various dialysate compositions, its uses and indications. Method for obtaining various compositions of dialysate

UNIT - IV

High flux / high efficiency dialysis: Definition of high flux / high efficiency dialysis, difference between high flux and high efficiency dialysis

UNIT - V

Continuous Renal Replacement Therapy / Slow Low Efficiency Dialysis: Definition, indications, uses, method of initiation of dialysis, contraindications of therapy.

DIALYSIS EQUIPMENTS, ACCESSORIES AND FUNCTIONS (PRACTICAL)
Course Code: MED.010P
Credit Hours: 3

- Conducted as per theory syllabus

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

SCHEME OF EXAMINATION - PRACTICALS

S. No.	Particulars	Marks
1	Log Book	5
2	Attendance	10
3	Internal (1^{st} ,2^{nd} Hourly & Mid-term)	10
4	Viva-voce	25
	TOTAL MARKS	**50**

RENAL PATHOLOGY (THEORY)
Course Code: PAT.011T
Credit Hours: 3
Semester: II

UNIT- I
Congenital abnormalities of urinary system
UNIT- II
Classification of renal diseases, Vascular Disorders
UNIT- IV
Tubulointerstitial diseases
UNIT- VI
End stage renal diseases – causes & pathology
UNIT- IX

RENAL PATHOLOGY (PRACTICAL)
Course Code: PAT.011P
Credit Hours: 2

- Demonstration of diagnostic tests for given pathologies as per theory syllabus

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

SCHEME OF EXAMINATION - PRACTICALS

S. No.	Particulars	Marks
1	Log Book	5
2	Attendance	10
3	Internal (1^{st} ,2^{nd} Hourly & Mid-term)	10
4	Viva-voce	25
	TOTAL MARKS	**50**

COMMUNICATION SKILLS
Course Code: PMS.012T
Credit Hours: 2
Semester: II

UNIT – I
Essentials of grammar
Parts of speech:

- Articles
- Nouns
- Pronouns
- Adjective
- Verb/Adverb
- Preposition, Conjuctions, Interjections

UNIT- II
Nature, scope & process of communication:

- Definition
- Process
- Various Models
- Elements
- Essential Flow of Communication
- Media of Communication
- Barriers/Factors inhibiting communication.

UNIT – III
Formal Conversations:
Meetings; Duties of participants; Interviews; Group Discussions.
UNIT- IV
Essay & Precis Writing

- Comprehension

UNIT – V
Formal & Informal Letters.

SCHEME OF EXAMINATION - THEORY

Type of Questions	Total No. of Questions	No. of Questions to be attempted	Marks (each Question)	Subtotal
SEC –A (Comprehensive)	1	1	1	10
SEC – B (Short Answer)	8	5	2	10
SEC – C (Essay writing)	3	1	10	10
SEC-D (Precis writing)	1	1	10	10
SEC-E (Letter writing)	2	1	10	10
			Total Marks	**50**

COMPUTER BASICS (THEORY)
Course Code: PMS.013T
Credit Hours: 2
Semester: II

UNIT –I

Input and Output UNITs: Their functional characteristics, main memory, cache memory read only memory, overview of storage devices – floppy disk, hard disk, compact disk, tape.

Computer Networks and Communication: Network types, Network topologies, Network communication devices, Physical communication media, TCP/IP.

Internet and its Applications: E-mail, Telnet, FTP, WWW, Internet chatting

UNIT-II

World Wide Web (www) - History, Working, Web Browsers, Its functions, Concept of Search Engines, Searching the Web, HTTP, URLs, Web Servers, Web Protocols.

UNIT-III

MS Office: word, paint ,power point & excel; acrobat reader

UNIT-IV

Computer Viruses : Introduction, working of viruses, Categorization of computer viruses, Antivirus & its working, Virus identification techniques.

UNIT –V

Information system : definition, components & types of information system

Operational support systems & support to knowledge work

Management support systems

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

PHARMACOLOGY RELATED TO DIALYSIS TECHNOLOGY (THEORY)
Course Code: PHR.014T
Credit Hours: 3
Semester: III

- IV fluid therapy with special emphasis in renal diseases.
- Diuretics: classification, actions, dosage, side effects & contraindications.
- Anti hypertensives: classification, actions, dosage, side effects
- Drugs & dialysis: dose & duration of administration of drugs.
- Vitamin D, phosphate binders, iron, folic acid & other vitamins of therapeutic value.
- Erythropoietin in detail.
- Heparin including low molecular weight heparin. Protamine sulphate.
- Haemodialysis concentrates: composition & dilution (acetate & bicarbonates).

PHARMACOLOGY RELATED TO DIALYSIS TECHNOLOGY (PRACTICAL)
Course Code: PHR.014P
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	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

SCHEME OF EXAMINATION - PRACTICALS

S. No.	Particulars	Marks
1	Log Book	5
2	Attendance	10
3	Internal (1^{st} ,2^{nd} Hourly & Mid-term)	10
4	Viva-voce	25
	TOTAL MARKS	**50**

GENERAL MEDICINE (THEORY)
Course Code: MED.015T
Credit Hours: 3
Semester: III

UNIT- I

History taking and symptomatology of : polyuria, vomiting, diarrhea, jaundice.

UNIT- II

Abdomen- hepatomegaly, splenomegaly, renal diseases.

UNIT- III

Disorders of circulatory & respiratory system: pleural effusion, pulmonary tuberculosis cardiac failure, congenital heart diseases, hypertension.

UNIT- IV

Disorders of endocrine system: diabetes, hypoglycemia, hyperthyroidism

UNIT-V

Disorders of nervous system: Hemiplegia, periplegia, paralysis.

UNIT-VI

Medical emergencies: cardiac arrest, bronchial asthma, respiratory failure.

UNIT- VII

Blood Disorders: Anemia's, leukemia's, AIDS.

GENERAL MEDICINE (PRACTICAL)
Course Code: MED.015P
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	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

SCHEME OF EXAMINATION - PRACTICALS

S. No.	Particulars	Marks
1	Log Book	5
2	Attendance	10
3	Internal (1st ,2nd Hourly & Mid-term)	10
4	Viva-voce	25
	TOTAL MARKS	**50**

BLOOD BANK PROCEDURES & HAEMOGLOBINOPATHIES (THEORY)
Course Code: PMS.017T
Credit Hours: 3
Semester: III

UNIT-I: Blood Grouping

- Human Blood Group system
- ABO Subgroups
- Red Cell Antigen, Natural Antibodies
- Hemolytic Disease of Newborn & Prevention
- Principle of Blood grouping, antigen-antibody reaction.
- Agglutination, Hemagglutination, Condition required for antigen antibody reaction.
- Methods for ABO grouping- Slide & Tube Method, Cell grouping, Serum grouping, Rh grouping by slide & tube method.

UNIT-II: Blood Transfusion

- Principal & Practice of blood Transfusion.
- Blood Transfusion service at District level.
- Guide lines for the use of Blood, Appropriate use of Blood, Quality Assurance.
- Antilogous Blood Transfusion practices.

UNIT-III: Blood Donation

- Blood donor requirements, Criteria for selection & rejection, medical history & personal details, Self-exclusion, Health checks before donating blood, Screening for TTI.

UNIT-IV: Blood Collection

- Blood collection packs.
- Anticoagulants.
- Taking & giving sets in Blood transfusion
- Adverse donor reaction.

UNIT-VI: Storage & Transport

- Storage of blood, Changes in blood after storage, Gas refrigerator, Transportation.

UNIT-VII: Maintenance of Blood Bank Records

- Blood donation record book, Recording results, Blood donor card, Blood bank temperature sheet, Blood bank stock sheet, Blood transfusion request form.

BLOOD BANK PROCEDURES & HAEMOGLOBINOPATHIES (PRACTICAL)
Course Code: PMS.017P
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	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

SCHEME OF EXAMINATION - PRACTICALS

S. No.	Particulars	Marks
1	Log Book	5
2	Attendance	10
3	Internal (1^{st} ,2^{nd} Hourly & Mid-term)	10
4	Viva-voce	25
	TOTAL MARKS	**50**

COMMUNITY HEALTH
Course Code: PMS.018T
Credit Hours: 2
Semester: III

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

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**

NUTRITION
Course Code: PMS.019T
Credit Hours: 2
Semester: III

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

SCHEME OF EXAMINATION - THEORY

Types of Questions	Total No. of Questions	No. of Questions to be attempted	Marks	Subtotal
SEC -A: MCQ's	10	10	1	10
SEC -B: Short Answer Questions	7	5	3	15
SEC -C: Short Essay	7	5	5	25
			TOTAL MARKS	**50**