CURRICULUM 2nd SEMESTER 2 YEARS TECHNOLOGY
PATHOLOGY TECHNOLOGY

Paper A Haematology & clinical Pathology –I

Paper B Histo & Microbiology

1. **HAEMATOLOGY**
   - Introduction to Hematology
   - Reagents and equipments used
     - Hb% estimation, RBC, WBC, Platelets Counts
     - 2.Staining, peripheral smear, (Giemsa staining) R....count, Bone marrow smear
   - Blood cells and stages of development
   - Hemoglobin and its estimation
   - Anticoagulants and sample collection
   - RBC morphology and counts
   - Erythrocytes sedimentation Rate (ESR) procedure and its value in disease condition

2. **CHEMICAL PATHOLOGY**
   - Introduction to chemical pathology
   - Measurements(lengths, volume, weight, concentration Molarity, Normality, Molality, Equivalence solution, % solution, stock solution, working solution etc W/W solution, V/W solution, W/V solution)
   - Principle of instruments used in biochemical tests
     1.Flasks
        - Conical
        - Round based
        - Relorts
        - Graduated
        - Hard glass
     ii. Test tubes
     iii. Pipits
     iv. Covets

3. **HISTOPATHOLOGY**
   - Introduction to Histopathology
   - Normal Histology of
     - Simple Epithelium
PATHOLOGY TECHNOLOGY

a. Squamous
b. Columnar
   i. Ciliated
   ii. Non ciliated
c. Cuboidal
   i. Stratified
   ii. Transitional

4. MICROBIOLOGY
   • Introduction to microbiology
   • Classification of bacteria
   • Description of bacteria
   • Common pathogenic bacteria (Enumeration of Respiratory tract, GI tract, Skin, Urinary tract and Genital tract)
CURRICULUM 3rd SEMESTER PATHOLOGY TECHNOLOGY

Paper A Haematology & clinical Pathology-II

Paper B Histo & Microbiology –II

HAEMATOLOGY
- Leucocytes morphology and counts
- Platelets
- Leucocytes
- Blood coagulation
- Blood banking
  - Introduction
  - Temperature maintenance
  - Record keeping
  - Donor selection
  - Venepuncture and blood collection
  - Labelling and storage
  - Patient blood collection
  - Blood Grouping
  - Cross Matching
  - Screening of Doner,s blood(for HIV,HBS,HCV)

1. CHEMICAL PATHOLOGY
- Acid/Base
- Buffers concentration Unit
- Urinalysis
  - Biochemistry
    - Sugar
    - Albumen
    - Bile salts
    - Bile Pigments
- Blood chemistry
  - Parameters in blood chemistry
  - Normal values
  - End-point and kinetic Measurements
  - Serum/Plasma Separation
  - Protein precipitant to obtain protein free fluid (PFF)
  - Changes in blood chemistry on storage of sample and preservation

2. HISTOPATHOLOGY
- Routine Histopathological techniques

3. MICROBIOLOGY
- Introduction to virology
- Introduction to serology
- Introduction to immunity and hypersensitivity
CURRICULUM 4th SEMESTER 2 PATHOLOGY TECHNOLOGY

Paper A Haematology & clinical Pathology III

Paper B Histo & Microbiology -III

1. **HAEMATOLOGY**
   - Blood bank
     - Space
     - Staff Requirements
     - Equipments
   - Haemagglutivation reactions
   - Antigens
   - Blood group system
   - Blood transfusion reaction
   - Quality control
   - Bio-safety measures
   - review

2. **CHEMICAL PATHOLOGY**
   - Assay techniques and principals
   - Examination of body fluids
   - Quality control
   - Bio-safety measures

3. **HISTO PATHOLOGY**
   - Practical work in histopathology
   - Quality control
   - Bio-safety measures

4. **MICROBIOLOGY**
   - Autoimmune disease immunization
   - Para cytology
   - Mycology
   - Quality control