

## **SUBJECT - BIOCHEMISTRY AND CLINICAL PATHOLOGY**

Branch/Discipline - Pharmacy

Minimum Number of class tests to be conducted - 3

Theory (50 hours)

### **Course Contents -**

1. Introduction to Biochemistry.
2. Brief chemistry & role of proteins, polypeptides & amino acids, classification, Qualitative tests, Biological value, Deficiency diseases.
3. Brief chemistry & role of Carbohydrates, Classification, qualitative tests. Diseases related to carbohydrate metabolism.
4. Brief chemistry & role of Lipids, Classification, qualitative tests. Diseases related to lipids metabolism.
5. Brief chemistry & role of Vitamins & Coenzymes.
6. role of minerals & water in life processes.
7. Enzymes: Brief concept of enzyme action. Factors affecting it. Therapeutic & pharmaceutical importance.
8. Brief concept of normal & abnormal metabolism of proteins, carbohydrates & lipids.
9. Introduction to pathology of blood & urine.
  - a. Lymphocytes & Platelets, their role in health & disease.
  - b. Erythrocytes-Abnormal cells & their significance.
  - c. Abnormal constituents of urine & their significance in diseases.

### **PRACTICAL (75 Hours)**

1. Detection and identification of Proteins, Amino acid, Carbohydrates & Lipids.
2. Analysis of normal and abnormal constituents of blood & urine (Glucose, Urea, Creatine Creatinine Cholesterol, alkaline phosphates, acid phosphates, Bilirubin, SGPT, SGOT, Calcium, Diastase, Lipase.)
3. Examination of sputum and faeces (microscope staining).
4. Practice in injecting drugs by intramusculaneous and intravenous routes. Withdrawal of blood.....