

## TUTOR IN BIOCHEMISTRY

Cell membrane structure : functions, membrane transport and its clinical significance.

Chemistry ; Carbohydrates. Proteins and lipids.

PLASMA PROTEINS : their functions & clinical importance.

Prostaglandins and their biochemical significance.

Hemoglobin, Myoglobin : structure & functional relationships.

Catabolism of hemoglobin Disorders of hemoglobin metabolism.

Thalassemia, Sickle cell anemia, Jaundice etc.

Clinical interpretations.

Enzymes and their diagnostic importance in Modern medicine.

Body fluids, Fluid electrolyte balance its physiology. Oral rehydration

Therapy. Acid base balance in health & disease.

Nutrition, Malnutrition.

VITAMINS : Fat soluble & water soluble vitamins- their normal functions and deficiency symptoms.

DIGESTION of Carbohydrates, Proteins and lipids and associated abnormalities.

METABOLISM of Carbohydrates, Proteins and lipids.

GENETIC DISORDERS of Carbohydrates, Proteins & lipids metabolism.

LIPOPROTEINS : Their importance in modern medicine.

IMMUNOGLOBULINS : their functions & clinical importance.

Gene expression, regulation, GENETIC ENGINEERING and its applications in medicine.

ORGAN FUNCTION TESTS : Kidney, liver, thyroid, stomach, pancreas, etc.

Metabolic abnormalities in DIABETES MELLITUS, STARVATION, OBESITY etc.

Tumour markers ; Applications in medicine.

Working principle of Spectrophotometry, Electrophoresis, Chromatography, etc.

Investigation done by ELISA based techniques.

Radioimmunoassay ; Principle & utility in medicine.

Biochemical significance of Minerals & trace elements,....

Environmental Biochemistry ; basis of ; env. health, cancer,...

Biosynthesis of Proteins; transcription, replication, translation., etc...