BIOCHEMISTRY

1.BIOMOLECULES AND CELL

Active transport*******

Fluid mosaic model***

2.CARBOHYDRATES

Mucopolysaccharides and related disorders*******

Disaccharides*

Homopolysaccharides*

3.LIPIDS

Classification of lipids

Lipoprotein*******

Phospholipid

Trans fatty acid

Essential fatty acid

4.PROTEIN

Glycoprotein*

Amino acid classification

Structure of protein

5.ENZYMES

Enzyme inhibition**********

Enzyme and factor affecting enzyme****

Diagnostic importance pf enzyme******

Isoenzyme and its application******

Coenzyme and its biochemical function*

6.BIOLOGICAL OXIDATION

Oxidative phosphorylation*

Uncouplers**

ETC and its inhibitors**********

ATP*

Chemiosmotic theory*

7.ORGAN FUNCTION TEST

LFTS- liver***

RFTS- renal*******

TFTS- thyroid**

8.CARBOHYDRATE METABOLISM

Glycolysis

Glycogen storage diseases******

Krebs cycle*****

Gluconeogenesis*****

HMP shunt****

Glycogenolysis***

9.LIPID METABOLISM

B-oxidation*******

Ketone bodies metabolism********

Fatty liver

Metabolism of LDL & HDL**

Atherosclerosis

10.AIDS

11.PROSTAGLANDINS******

12.IMMUNOLOGY

Immunoglobulin function and structure**********

Cell mediated immunity**

13.CANCER

Tumour markers*******

Carcinogenic virus

Oncogenes and proto-oncogenes*******

14.FREE RADICLES AND ANTIOXIDANTS*****

Antioxidant vitamin******

15.ENVIROMENTAL BIOCHEMISTRY

Heavy metal poisoning*****

Air pollution*****

Water pollution**

16.GLUCOSE HOMEOSTASIS AND DIABETES MELLITUS***

17.TOOLS OF BIOCHEMISTRY

ELISA***

Chromatography******

Electrophoresis*****

18.WATER, ELECTROLYTE AND ACID BASE BALANCE

Metabolic acidosis******

Blood buffer and importance****

Role of kidney in acid base balance******

Role of RAAS in water balance

19.HEMOGLOBIN AND PORPHYRINS

Types of abnormal haemoglobin and sickle cell anemia********

Thalassemia*

Porphyria****

Jaundice*****

Degradation of haem*

Heme synthesis

Hemoglobinopathies*

O2 dissociation curve

Hyperbilirubinemia***

20.METABOLISM OF AMINO ACIDS

Disposal, formation and detoxification of ammonia and its fate******

Urea cycle and related disorders****

Inborn error of aromatic amino acids****

Phenylketonuria***

Sulphur containing amino acid-function*

One carbon metabolism******

21.INTEGRATION OF METABOLISM

Metabolic adaptation during fed and starvation**********

22.NUCLEOTIDE METABOLISM

Purine salvage pathway and its importance*******

Disorder of purine metabolism**********

Disorder of pyrimidine metabolism*

Uric acid formation*

23.MINERAL METABOLISM

Copper**

Iron**

Factors regulating blood calcium level****

Biochemical role of selenium***

24.NUCLEOTIDES

Biologically active nucleotides****

Structure and type of DNA**

Structure and function of tRNA**********

25.VITAMINS

Vitamin A- WALD's visual cycle

Vitamin D- deficiency

Regulation of blood calcium level

Vitamin C- function*

Pellagra**

Niacin*

Folic acid: role and deficiency manifestation

Pernicious anaemia*

Role of B12 and deficiency****

Beri beri

Methyl folate trap**

26.GENE THERAPY****

27.NUTRITION

BMR******

Importance of dietary fibre**

Balanced diet**

PEM**********

Glycemic index**

28.PLASMA PROTEIN AND CLINICAL SIGNIFICANCE**

Acute phase protein

29.DIGESTION AND ABSORPTION

FAT: digestion and absorption

30.DNA REPLICATION, RECOMBINATION AND REPAIR

Replication of DNA and its inhibitors******

Telomere and function*

Damage and repair of DNA***

Mutations********

31.TRANSLATION AMD TRANSCRIPTION

Inhibitor of translation*

Post translation modification*****

Post transcription modification*****

Genetic code******

32.REGULATION OF GENE EXPRESSION

Lac operon and gene expression******

33.RECOMBINANT DNA TECHNOLOGY

Recombinant DNA technology and its importance****

Blotting technology and its application*********

PCR advantage and medical application*******

34. DETOXIFICATION OF XENOBIOTICS

Conjugated reaction of detoxification