



ANATOMY

HNF

SN

1. Digastric Triangle
2. Nasal Septum*
3. Thyroid Gland – Blood Supply*, Applied Anatomy
4. Carotid Sheath
5. Muscles of Mastication
6. Cavernous Sinus*
7. Carotid Triangle
8. Little's Area of Nose – Clinical Significance
9. Lateral Rectus Muscle of Eyeball
10. Hyoid Bone
11. Palatine Tonsil – Applied Anatomy*
12. Dangerous Area of Face
13. Nasal Meatus
14. Tongue – Applied Anatomy
15. Ansa Cervicalis
16. Falx Cerebri

LAQ

1. Parotid Gland****
2. Tongue**
3. Scalp
4. Thyroid Gland**
5. Middle Ear

Upper Limb

SN

1. Cubital Fossa**
2. Klumpke's Paralysis*
3. Abduction at Shoulder Joint
4. Rotator Cuff
5. Carpal Tunnel Syndrome**





6. Mammary Gland – Lymphatic Drainage****, Applied Anatomy
7. Erb's Paralysis*
8. Pronation and Supination
9. Clavipectoral Fascia
10. Clawhand – Features and Causative Factors
11. Musculocutaneous Nerve

LAQ

1. Shoulder Joint***
2. Ulnar Nerve*
3. Brachial Plexus
4. Cubital Fossa
5. Axillary Artery
6. Mid-Palmar Space
7. Radial Nerve
8. Median Nerve

Thorax

SN

1. Thoracic Duct
2. Root of Right Lung
3. Azygous Vein
4. Arch of Aorta
5. Typical Intercostal Nerve
6. Bronchopulmonary Segments of Left Lung
7. Left Coronary Artery*
8. Bronchopulmonary Segments – Applied Anatomy*
9. Coronary Sinus

LAQ

1. Bronchopulmonary Segments
2. Right Atrium**
3. Arch of Aorta**
4. Superior Mediastinum





Neuroanatomy

SN

1. Medial Medullary Syndrome
2. Floor of Fourth Ventricle**
3. Circle of Willis
4. T.S. Medulla Oblongata – Pyramidal Decussation
5. T.S. Midbrain – Superior Colliculus Level*
6. Corpus Callosum**
7. Brown Sequard Syndrome
8. Inferior Cerebellar Peduncle*
9. T.S. Spinal Cord – Cervical Level
10. Internal Capsule

LAQ

1. Glossopharyngeal Nerve*
2. Superolateral Surface of Cerebrum**
3. Internal Capsule*
4. Pons
5. Oculomotor Nerve
6. Midbrain
7. Functional Areas in Frontal Lobe

Abdomen & Pelvis

SN

1. Anal Canal – Applied Aspect
2. Portacaval Anastomosis* – Applied Anatomy
3. Inguinal Hernia* – Direct, Indirect
4. Male Urethra
5. Caput Medusae
6. Uterus – Supports*, Applied Anatomy
7. Stomach Bed*
8. Meckel's Diverticulum*
9. Inguinal Canal
10. Ischiorectal Fossa*
11. Lesser Omentum*
12. Rectus Sheath
13. Inferior Vena Cava





14. Superficial Perineal Pouch
15. McBurney's Point
16. Interior of Urinary Bladder
17. Umbilicus - Anatomical and Clinical Importance
18. Perineal Body
19. Contraception – Anatomical Basis
20. Anterior Relations of Right Kidney – diagram
21. Hysterosalpingography

LAQ

1. Pancreas**
2. Ischiorectal Fossa
3. Kidney
4. Uterine Tube
5. Testes
6. Extra-Hepatic Biliary Apparatus*
7. Rectus Sheath
8. Urinary Bladder*
9. Prostate**
10. Suprarenal Gland*
11. Uterus
12. Stomach**
13. Ovary*
14. Duodenum – 2nd Part
15. Anal Canal*
16. Diaphragm
17. Inguinal Canal*
18. Internal Iliac Artery

Lower Limb

SN

1. Sartorius*
2. Medial Longitudinal Arch* – Factors Maintaining
3. Gluteus Maximus
4. Foot Drop* - Anatomical Basis
5. Femoral Sheath
6. Femoral Canal*
7. Popliteus**





8. Inversion and Eversion* - Inverters and Everters with Nerve Supply
9. Superficial Inguinal Lymph Nodes
10. Femoral Hernia
11. Longitudinal Arches of Foot
12. Gastrocnemius
13. Great Saphenous Vein

LAQ

1. Hip Joint*
2. Venous Drainage of Lower Limb
3. Intra-Articular Structures of Knee Joint*
4. Sciatic Nerve
5. Femoral Triangle
6. Knee Joint**
7. Popliteal Fossa*
8. Lateral Longitudinal Arch of Foot
9. Veins of Inferior Extremity
10. Structures Under Gluteus Maximus – diagram

General Anatomy

1. Synovial Joint** - diagram, classification, examples
2. Classification of Fibrous Joint
3. Sesamoid Bone
4. Cartilaginous Joint - classification, example
5. Epiphysis
6. Secondary Cartilaginous Joint
7. Pivot Joint
8. Blood Supply of Long bone

Histology

1. Adrenal**
2. Muscular Artery*
3. Stratified Squamous Epithelium
4. Testes**
5. Ovary
6. Compact Bone





7. Spleen**
8. Kidney
9. Lymph Node

Embryology

1. Notocord
2. Mesonephric Duct
3. Primitive Streak
4. Phases of Fertilisation
5. Pancreas*
6. Neural Tube Defects
7. Vitello-intestinal Duct
8. Urinary Bladder
9. Descent of Testes*
10. Developmental Anomalies of Kidney
11. Rotation of Gut
12. Fate and Derivatives of Yolk Sac

Genetics

1. Barr Body*
2. Lyons Hypothesis
3. Turner's Syndrome*
4. Karyotyping*
5. Monosomy of Sex Chromosome
6. Down's Syndrome*
7. Structural Chromosome Abnormalities
8. Autosomal Dominant Inheritance
9. Structural and Numerical Chromosome Abnormalities with example



PHYSIOLOGY

Paper 1

CVS

SN

1. Circulatory Shock - define, classify, stages, physiological principles of management
2. Connections of Unipolar and Bipolar Limb Leads while regarding ECG
3. ECG Trace in Lead II* - draw, label, mark intervals
4. CNS Ischemic Response
5. Baroreceptor Reflex Mechanism
6. Ventricular Diastole - events
7. Properties of Cardiac Muscle*, Ionic Basis of Autorhythmicity in SA Node, Why Heart Muscle Cannot be Tetanized
8. Role of JGA in Regulation of Blood Pressure
9. Coronary Circulation - peculiarities, Angina Pectoris
10. Renin-Angiotensin Mechanism
11. Heart Block - enlist types, explain AV Nodal Block
12. Heart Rate - explain increase in heart rate in muscular exercise
13. Fick Principle
14. ECG - diagram, Bipolar Limb Leads
15. Venous Return
16. Factors Affecting Stroke Volume
17. Effect of Isotonic Exercise on Blood Pressure

LAQ

1. Cardiac Cycle** - define, pressure and volume changes in left ventricle*, diagram; Third and Fourth Heart Sound*
2. Coronary Circulation - physiologic anatomy, factors affecting, special features; Angina Pectoris
3. Blood Pressure - define, long-term regulation
4. Circulatory Shock** - define, classify; Compensatory Stage of Circulatory Shock, Progressive Stage, Hemorrhagic Shock Physiological Basis of its Management
5. ECG - define; Explain ECG in Lead II - diagram; Heart Block





6. Mean Arterial Blood Pressure - define, enumerate mechanisms regulating; Baroreceptor Mechanism - describe
7. Regulation of BP - classify mechanism; Short Term Regulation
8. Define - Stroke Volume, Cardiac Output, Cardiac Index, Stroke Volume Index; Factors Affecting Cardiac Output
9. Heart Rate - define, factors affecting and regulating

GIT

SN

1. Functions of Bile Salts**, Composition
2. Peptic Ulcer*** - etiology, physiological basis of treatment
3. Regulation of Gastric Emptying*
4. Phases of Deglutition - enlist, Pharyngeal Phase** - explain
5. Mechanism of Secretion of HCl by Parietal Cells, Gastric Glands
6. Movement of Small Intestine, Peristaltic Rush
7. Mechanism of Secretion of HCl*
8. Importance of Deglutition Reflex
9. Movement of Large Intestine, Defecation Reflex*
10. Enumerate GIT Hormones, Note on Gastrin, CCK
11. Regulation of Gastric Motility
12. Absorption of Fat

LAQ

1. Deglutition, Achalasia Cardia
2. Pancreatic Juice - composition, function, regulation of secretion
3. Gastric Glands - enumerate, secretion, function; Treatment of Peptic Ulcer*
4. Gastric Juice - composition; HCl Secretion - mechanism, factors regulating***

Endocrine System

SN

1. Functions of Insulin
2. Diabetes Mellitus and Insipidus* - compare and contrast
3. Parathyroid hormone - functions, regulation
4. Growth Hormone* - metabolic action
5. Insulin Secretion - factors increasing, effect in promoting growth

6. Diabetes Insipidus, Cushing Syndrome
7. Tetany, Signs of Tetany, Treatment
8. Cushing Syndrome*, Clinical Features

LAQ

1. Glucocorticoids - regulation of secretion, mechanism of action, function, effect of deficiency
2. Thyroid Hormone Synthesis and Release - enumerate steps, diagram; Anti-Thyroid Drugs - action
3. Hormonal Regulation of Growth*, Dwarfism, Pituitary & Thyroid Dwarf Differences
4. Thyroid* - synthesis, mechanism of action, regulation of secretion, function; Endemic Goitre, Hypothyroidism
5. Calcium* - importance, regulation; Tetany, Osteoporosis
6. Adrenal Cortex - enumerate hormones; Factors Regulating Secretion of Aldosterone
7. Anterior Pituitary - enumerate hormones secreted; Physiological Actions of Growth Hormone*, Dwarfism

Reproductive System**SN**

1. Indicators of Ovulation, Clinical Significance
2. Methods of Contraception*** - temporary, Physiological Basis of Oral Contraceptives, Safe Period
3. Spermatogenesis* - describe stages, enlist factors affecting it
4. Physiological Changes in Pregnancy
5. Maternal Changes in Last Trimester of Pregnancy
6. Mechanism of Ovulation, Contraception - rhythm method
7. Menstrual Cycle - phases
8. Circulatory Changes at Birth
9. Menstrual Cycle - hormonal and uterine changes, diagram
10. Parturition - explain, role of oxytocin

LAQ

1. Menstrual Cycle - phases, hormonal control
2. Cyclical Changes in Uterus during Reproductive Life, Its Hormonal Regulation



RS

SN

1. Oxygen-Hemoglobin Dissociation Curve** - draw, label, factors affecting, Bohr's Effect, factors shifting curve to right, what is P_{50} , role of 2,3-BPG
2. Characteristics of Pulmonary Circulation
3. Acclimatization to High Altitude - enumerate physiological changes, significance of changes
4. Heat Stroke
5. Heat Loss*** - enumerate methods, mechanism, mechanism of sweating
6. Peripheral Chemoreceptors - characteristics, functions
7. Factors Affecting Composition of Alveolar Air
8. Oxygen Debt*
9. Hypoxia*** - define, classify, describe Hypoxic Hypoxia
10. Ways of Heat Loss, Heat Stroke
11. Surfactant* - functions, note on RDS
12. Transport of Carbon dioxide, Haldane Effect
13. Response of Body when exposed to Extreme Cold**, Hypothermia, Use of Induced Hypothermia
14. Effect of Exercise on Respiration, what is VO_2 max
15. Explain Work of Breathing*, Applied Importance, Enumerate Muscles of Respiration
16. Functional Residual Capacity - physiological significance
17. Acclimatization to High Altitude - various changes, Acute Mountain Sickness
18. Haldane Effect
19. Role of Hypothalamus in Temperature Regulation

LAQ

1. Neural Regulation of Breathing**, Periodic Breathing, Ondine's Curse*
2. Transport of CO_2 , Haldane Effect, Its Significance
3. Lung Compliance* - describe, factors affecting; Hyaline Membrane Disease
4. Respiratory Membrane* - describe, factors affecting gaseous exchange; Principle of CO Method
5. Pulmonary Ventilation - mechanism; Positive Pressure Breathing
6. Oxygen Transport - describe method
7. Chemical Control of Respiration





Paper 2

CNS

SN

1. Receptor** - enumerate properties, any two properties in detail
2. Referred Pain*, Enumerate Different Types of Pain
3. Lesions of Upper and Lower Motor Neuron
4. Functions of Basal Ganglia*
5. Middle Ear - functions
6. Parkinsonism**
7. i. Pathway of Proprioceptive Sensations from Periphery to Cortex
ii. Sensory Ataxia - define, difference from Cerebellar Ataxia
8. REM Sleep**, Narcolepsy
9. Muscle Spindle* - diagram, function
10. Speech
11. Descending Pain Inhibiting System
12. Aphasia - define, different types
13. Different types of Pain, Transmission of Pain through Neospinothalamic Pathway
14. Ascending Tracts - name; Labelled Diagram of Pain Pathway
15. Lower Motor Neuron - define, features of LMN paralysis
16. Important Areas of Frontal Lobe - diagram, Functions of Prefrontal Lobe
17. Sensory Receptors, Adaptation and Intensity Discrimination
18. Fast and Slow Pain
19. Memory - define, types; Alzheimer's

LAQ

1. Ascending Tracts** - enumerate;
 - i. Dorsal Column System - origin, course, termination; Phantom Limb
 - ii. Pathway for Touch Sensation - describe
 - iii. Pathway for Line Touch Sensation, Law of Projection
2. Muscle Spindle - diagram; Role of Stretch Reflex in Controlling Muscle of Tone
3. Functions of Hypothalamus** - enumerate, explain any three in detail
4. Basal Ganglia* - connections, functions; Parkinsonism - clinical features
5. Cerebellum** - functions, connections, applied importance
6. Complete Transection of Spinal Cord - effects
7. Pyramidal Tracts* - origin, course, termination, function, applied
8. Lobes of Neocortex – functions





Renal Physiology

SN

1. JGA - diagram, functions**
2. Countercurrent Multiplier Mechanism
3. Role of Kidney in Acid-Base Balance
4. i. Transport Maximum - define
ii. Mechanism of Glucose Reabsorption in Renal Tubules
5. GFR - define, factors***; Tubular Glomerular Feedback, Glomerular Tubular Balance
6. Cystometrography
7. PCT - functions
8. Countercurrent Mechanism
9. Innervation of Urinary Bladder, Micturition Reflex

LAQ

1. GFR** - define, enumerate factors affecting, methods of measurement, regulation
2. Physiology of Micturition*; Cystometrograph
3. DCT - functions
4. Milieu Interior - define; Role of Kidney in Maintaining Osmolarity of Body Fluid

Special Senses

SN

1. Visual Pathway* - diagram, lesions, heteronymous hemianopia
2. Dark Adaptation** - define, significance
3. Organ of Corti
4. Accommodation of Eye*, Accommodation Reflex* - describe, significance; Presbyopia
5. Place Principle, Explain Role of Basilar Membrane in Perception of Sound*
6. Colour Vision
7. Impedance Matching, Causes of Conductive Deafness
8. Olfactory Pathway
9. Errors of Refraction; Myopia, Astigmatism - features, correction
10. Taste Sensation Pathway, Basic Modalities of Taste, Types of Papillae

LAQ

1. Mechanism of Hearing - describe; Pitch Discrimination
2. Colour Vision - mechanism; Colour Blindness





3. Accommodation - define, mechanism, neural pathway; Presbyopia
4. Photochemistry of Vision*, Dark Adaptation
5. Middle Ear - role; Organ of Corti

Nerve-Muscle Physiology

SN

1. Excitation-Contraction Coupling
2. Action Potential - define, compare ionic basis of large myelinated nerve fibre and SAN**
3. NMJ - diagram*, Myasthenia Gravis, End Plate Potential - define, generation
4. Properties of Nerve Fibres
5. Factors Regulating Force of Skeletal Muscle Contraction, Motor Unit - define
6. Refractory Period
7. Sarcotubular System
8. Red Muscle and Pale Muscle, Isotonic and Isometric Contraction
9. Saltatory Conductions, Factors Affecting Conduction Velocity
10. Compare, Contrast AP and Excitatory Post Synaptic Potential Neurons
11. RMP - define, explain ionic basis of RMP in nerve fibre
12. Molecular Basis of Muscle Contraction
13. Neuron - diagram, Nerve Impulse - define

LAQ

1. Genesis of Action Potential - describe; Properties of AP - enumerate
2. Sarcomere* - define, diagram; Sliding Filament Theory - explain
3. RMP - define, factors contributing; Phases of AP
4. NMJ* - diagram; Describe Neuromuscular Transmission; Myasthenia Gravis*
5. Synaptic Transmission - mechanism; Synapse - two properties
6. Molecular Basis of Skeletal Muscle Contraction*
7. Muscle Tone - define, regulation
8. i. RMP - define
ii. Ionic Basis for Development of RMP and AP

Blood

SN

1. Intrinsic Pathway of Coagulation



2. Role of B Lymphocytes
3. Blood Group - classify, Erythroblastosis Foetalis
4. Mismatched Blood Transfusion
5. Functions of Plasma Proteins*
6. Immunity* - define, primary and secondary immune response and its role in vaccination, role of T cells
7. Landsteiner's Law, Importance of Rh Blood Group*
8. CD4 Cells
9. Platelets - normal count, functions
10. Erythroblastosis foetalis - features, treatment
11. Bleeding Time, Clotting Time - define, Intrinsic Pathway - describe

LAQ

1. Coagulation - define, flowchart; Bleeding and Clotting Disorders - differences, examples
2. Immunity* - define, classify; Cell Mediated Immunity; Humoral Immunity, Vaccination
3. Clotting - define; Mechanism of Blood Coagulation - flowchart; Anticoagulants - name
4. WBC - classify, morphology, function

General Physiology

SN

1. Homeostasis** - define, compare between feedback systems
2. Transport Mechanism Across Cell Membrane, Secondary Active Transport*
3. Osmosis

LAQ

1. Transport Mechanism - describe, examples



BIOCHEMISTRY

Paper 1

Protein Metabolism

SN

1. Metabolism of Tyrosine (pg 345)
2. Biogenic Amines (pg 375)
3. Metabolism of Glycine (pg 341)
4. Alkaptonuria (pg 352)

LAQ

1. Inborn Errors of Metabolism of Tyrosine* and Phenylalanine
2. Formation and Fate of Ammonia**
3. Urea Cycle and Abnormalities***
4. Alkaptonuria - Biochemical Basis, Tests for Diagnosis
5. Glycine - synthesis, inhibition, specialised products formed
6. Transamination, Deamination, Ammonia Toxicity

Nucleotide Metabolism

SN

1. Purine Salvage Pathway** (pg 391)
2. Hyperuricemia (pg 394)
3. Gout** (pg 394)
4. Catabolism of Purines (pg 392)

Hemoglobin

SN

1. Hemoglobinopathies and examples (pg 203)
2. Abnormal Hemoglobin** - changes in AA sequence (pg 202)





LAQ

1. Catabolism of Heme*, Hemolytic Jaundice
2. Formation and Fate of Bilirubin; Jaundice
3. Biosynthesis and Degradation of Heme
4. Heme - biosynthesis, regulation*; Intermittent Porphyria

Vitamins

SN

1. Coenzymes of Thiamine of Pyridoxine - two biochemical functions of each
2. Functions of Folic Acid (pg 150)
3. Deficiency Manifestation of Vitamin A (pg 118)
4. Coenzyme Function of Folic Acid and B12 (pg 150)
5. Wald's Visual Cycle (pg 129)
6. Activation of Cholecalciferol, Justification as a Hormone (pg 124)

LAQ

1. Vitamin D
2. Vitamin A**
3. Vitamin B12 and Folic Acid
4. Vitamin C
5. Thiamine*

Enzymes

SN

1. Isoenzymes and Clinical Application*** (pg 109)
2. Enzymes and Isoenzymes in Myocardial Infarction** (pg 112)
3. Enzymes of Diagnostic, Analytic and Therapeutic Importance* (pg 105)
4. K_m Value (pg 88)
5. Activation Energy of Enzyme - E-S Complex (pg 98)

LAQ

1. Enzymes - definition, factors affecting enzyme activity*
2. Enzyme Inhibition - Competitive and Non-Competitive
3. Enzymes - classification, examples, Isoenzymes
4. Types of Enzyme Inhibitors





Biological Oxidation

SN

1. Substrate Level Phosphorylation (pg 224)
2. Oxidative Phosphorylation*** and Thermogenin (pg 228)
3. Malate Aspartate Shuttle* (pg 234)
4. Inhibitors of ETC (pg 232)
5. Uncouplers of Oxidative Phosphorylation (pg 233)
6. Difference between Oxidative and Substrate Level Phosphorylation

LAQ

1. Explain ETC, Mention Sites of
1. ATP Synthesis and Inhibitors of ETC**
2. Oxidative Phosphorylation
3. Explain ETC, Inhibitors and Uncouplers of Oxidative Phosphorylation

Molecular Biology

SN

1. Genetic Code*** (pg 551)
2. Mutation* - Causes and Types (pg 535)
3. Recombinant DNA Technology Application*
4. Reverse Transcription (pg 550)
5. DNA Replication (pg 524)
6. PCR (pg 534)
7. Lac Operon (pg 567)

LAQ

1. Protein Biosynthesis* and Inhibitors, Regulation
2. DNA Replication, Two Inhibitors of Replication
3. Genetic Code- salient features, Wobble's Hypothesis
4. Transcription, Post-Transcriptional Modification, Two Antibiotics Inhibiting the process





Proteins

SN

1. Biologically Important Peptides* (pg 65)
2. Secondary and Tertiary Structure of Proteins** (pg 56)
3. tRNA And Its Functions*** (pg 81)
4. Secondary Structure of Protein (pg 56)
5. Functional Classification of Proteins (pg 63)
6. Conjugated Proteins (pg 64)

Nucleotides

SN

1. Four Biochemical Functions of Nucleotides*

Free Radicals and Antioxidants

SN

1. Antioxidants (pg 655)
2. Antioxidant Enzymes*, Vitamins and Minerals
3. Free Radicals and Antioxidants

Nutrition

SN

1. Explain the Role of Dietary Fibres* (pg 508)
2. BMR - definition, factors (pg 504)
3. Protein Energy Malnutrition*** (pg 516)
4. Kwashiorkor* - Biochemical Alterations and Treatment (pg 516)



Plasma Proteins

SN

1. Immunoglobulin - diagram, describe any one Ig in detail* (pg 186)
2. Functions of Albumin (pg 183)

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Paper 2

Carbohydrate Metabolism

SN

1. Significance of HMP Shunt* (pg 270)
2. Rapaport Leubering Cycle, Significance (pg 251)
3. Glycogen Storage Disease* - enzyme defects, clinical manifestation (pg 269)

LAQ

1. Glycolytic Pathway in Erythrocytes, Significance, Difference from Glycolysis (pg 251)
2. Glycogenolysis, Regulation, Glycogen Storage Diseases* (pg 265)
3. TCA Cycle, Amphibolic Nature* (pg 252)
4. HMP Shunt*, Significance (pg 270)
5. Metabolism of Glycogen, Hormonal Regulation* (pg 263)

Lipid Metabolism

SN

1. Cholesterol - biomedical importance (pg 315)
2. Cholesterol - metabolism, function (pg 309)
3. Lipoproteins* (pg 317)
4. Fatty Liver* and Lipotropic Factors* (pg 322)
5. Ketosis (pg 296)

LAQ

1. Cholesterol Synthesis*** - name regulatory enzyme, normal level, functions, explain role in Atherosclerosis (pg 308)
2. Ketosis, Synthesis and Fate of Ketone Bodies (pg 293)
3. Beta Oxidation of Palmitic Acid, Regulation, Energetics** (pg 290)
4. Roles of LDL, HDL in Cholesterol Transport, Role in Atherosclerosis (pg 320, 326)
5. Fate of Acetyl CoA, Fatty Acid Synthesis (pg 297)

Mineral Metabolism

SN

1. Regulation of Serum Calcium Level (pg 407)
2. Role of Calcium as Second Messenger (pg 405)
3. Absorption of Iron (pg 414)

LAQ

1. Plasma Calcium Level - hormonal regulation, function, deficiency manifestation (pg 407)
2. Iron* (pg 414)
3. Calcium* (pg 404)
4. Calcium and Phosphorus (pg 404, 409)
5. Copper and Zinc (pg 416, 419)
6. Iron and Iodine (pg 414, 418)
7. Factors Influencing Calcium Absorption, Functions (pg 404)

Integration of Metabolism

SN

1. Short Term Starvation - metabolic changes (pg 383)
2. Biochemical Changes in Starvation** (pg 383)
3. Most Severe Phase of Starvation - biochemical changes (Pankaja - pg 276)

LAQ

1. Starvation Metabolism* (pg 383)

Acid-Base Balance

SN

1. Buffers** (pg 475)
2. Role of Kidney in Acid Base Balance (pg 477)
3. Any Two Buffer Systems (pg 475)
4. Metabolic Acidosis*, Its Compensation (pg 481)



LAQ

1. Metabolic Acidosis* - causes, explain compensatory role of blood buffers and kidney (pg 481)
2. Blood pH - maintenance, disorders associated with acid base balance (pg 474)
3. Water and Electrolyte Balance (pg 469)
4. Acid Base Balance, Imbalance, Causes (pg 474)

Insulin, Glucose Homeostasis and DM

SN

1. DM - metabolic changes* (pg 681)

LAQ

1. Hormonal Regulation of Blood Glucose Level**, Significance, Note on Glycosuria (pg 674, 681)

Organ Function Tests

SN

1. Creatinine Clearance Test**, Explanation, Significance (pg 461)
2. Urea Clearance (pg 461)

LAQ

1. Liver Function Tests** - enumerate, describe LFT based on excretory function (pg 453)

Carbohydrates

SN

1. Hyaluronic Acid - biomedical importance (pg 23)
2. GAGS, Significance*** (pg 25)



Lipid

SN

1. Phospholipids - classify, examples, one importance of each
2. Essential Fatty Acids (pg 31)

Digestion and Absorption

SN

1. Digestion and Absorption of Lipids (pg 173)

Hormones

SN

1. Group II Hormones - diagram, mechanism, example (pg 428)
2. Name Different Types of Messenger Hormones, Role of cAMP* (pg 430)
3. Mechanism of Hydrophilic Hormones
4. Mechanism of Steroid Hormones*

Cancer

SN

1. Tumour Markers*** - four examples (pg 691)
2. Oncogenes** and Proto-oncogenes* (pg 687)
3. Chemical Carcinogens* (pg 686)

Detoxification

SN

1. Conjugation** - examples (pg 640)
2. Detoxification by Oxidation and Hydrolysis (pg 639)
3. Metabolism of Xenobiotics - phase 1 reaction* (pg 638)





LCD

SN

1. Electrophoresis* - application, principle
2. Chromatography* - principle, application, type*
3. Flame Photometer - principle, parts, importance

Overview of Biophysical Chemistry

SN

1. Radioisotopes - diagnostic, therapeutic significance, application** (pg 717)

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