

## **PATHOLOGY : THEORY PAPER WISE COURSE DISTRIBUTION**

### **Paper 1: 1. Introduction to Pathology:**

Describe role of Pathologist in diagnosis and management of Disease, common definition and terms used, history and evolution of pathologist.

### **2. Cell injury and Adaption:**

Types of Cell injury, intracellular accumulation of fat, Protein, carbohydrate, pigments, Types of Cell death : Necrosis and apoptosis, autolysis, Calcification, Gangrin, Cellular adaptation: Atrophy, Hypertrophy, hyperplasia, Metaplasia, Dysplasia, Cellular aging, Amyloidosis.

### **3. Inflammation, Healing and repair:**

Acute and chronic inflammation, Chemical Mediators, Chronic Inflammation: Types, Granulomas Repair, regeneration and wound healing.

### **4. Hemodynamic disorders:**

Edema, Hyperemia, Congestion, Hemorrhage, Shocks: Types, stages and pathogenesis, Normal Hemostasis, Thrombosis, Embolism, Ischemia/Infarction : Types etiology.

### **5. Neoplasia:**

Define and classify, Benign Vs Malignant neoplasia, Molecular basis of Cancer, Carcinogens, Paraneoplastic syndromes, immunology and Immune response to cancer, Diagnostic Role of Cytology and its application, Exfoliative cytology.

### **6. Immunopathology and AIDS:**

Principles and mechanisms in immunity, hypersensitivity reactions, HLA systems, Transplant immunity and transplant rejection, Autoimmunity and autoimmune disorders, SLE: Pathogenesis, HIV and AIDS: Pathogenesis and Pathology.

### **7. Infections and infestations:**

Malaria, Cysticercosis, leprosy, Common Bacterial, Viral, Protozoal and helminthic diseases.

### **8. genetic and paediatric diseases:**

Common cytogenetic abnormalities and mutations in childhood, Pathology of Tumor and tumor like condition in infancy and childhood, Common storage disorders.

### **9. Environmental and nutritional Diseases:**

Disorders caused by air pollution, Tobacco and Alcohol, Protein calorie malnutrition and starvation, Obesity and its consequences.

## HAEMATOLOGY:

1. Introduction to Haematology

Haematopoiesis and extra medullar Haematopoiesis, Role of Anti coagulants, Define and classify anemia.

2. Microcytic Anemia: Iron Metabolism, Lab Investigation and Differential Diagnosis of Microcytic Anemia.

3. Macrocytic Anemia:

Vitamin B12 Metabolism, Lab Investigation, etiology and D/D of Megaloblastic and Non Megaloblastic anemia.

4. Haemolytic anemia:

Classify Haemolytic Anemia, Sickle Cell Anemia, Thalassemia, Acquired Haemolytic Anemia.

5. Aplastic Anemia:

6. Leukocyte disorders:

Causes of Leukocytosis, Leucopenia, Leukemoid reaction, Acute and chronic Leukaemia.

7. Lymph node and spleen:

Causes of Lymphadenopathy , TB Lymphadenitis, Hodgkins and Non Hodgkins Lymphoma, Causes of Splenomegaly.

8. Plasma Cell Disorders:

Plasma Cell Myeloma.

9. Hemorrhagic disorders:

Normal Haemostasis, Vascular and Platelet Disorders: ITP and Hemophilia, Clotting Disorders, DIC, Lab Findings of Vitamin K Deficiency.

10. Blood Banking and transfusion:

Classify Blood Group systems(ABO and RH), Compatibility Testing, Blood Components, Infection Transmitted, Transfusion reactions, Autologous Transfusion.

## CLINICAL PATHOLOGY:

1. Common Urinary Abnormalities, Body Fluids in various disease, Semen Analysis, Thyroid Function Test, Renal Function Test, Liver Function Test.

## Paper II: SYSTEMIC PATHOLOGY :

1. **Gastro intestinal tract:**

Oral Cancer, Peptic Ulcer Disease, Carcinoma of Stomach, TB of intestine, Inflammatory bowel Diseases, Carcinoma of Colon.

2. **Hepatobiliary systems:**

Bilirubin Metabolism, Jaundice, Hepatic Failure, viral and toxic hepatitis, Alcoholic Liver disease, cirrhosis, Portal Hypertension, Obstructive and non obstructive jaundice.

3. Respiratory Systems:

Pneumonia, Lung Abscess, obstructive Airway disease,, Bronchiectasis, Tuberculosis, Occupational Lung Diseases, Tumors of Lung and Pleura, Mesothelioma.

4. Cardiovascular systems:

Arteriosclerosis, Atherosclerosis, Aortic aneurysm, Heart Failure, Rheumatic Fever, Ischemic heart disease, infective endocarditis, Pericarditis and pericardial effusion, Cardiac Function Testing in acute Coronary syndrome, Cardiomyopathies, Complication of Syphilis on CVS.

5. Urinary Tract:

Renal Failure, ARF, CRF, Glomerular Diseases and Glomerulonephritis, IgA Nephropathy, Tubulo Interstitial diseases, Acute Tubular Necrosis, Acute and Chronic Pyelonephritis, Reflux nephropathy, Vascular Diseases of Kidney, Cystic Diseases, Renal Stone Diseases and Obstructive Uropathy, Renal Tumors, Thrombotic angiopathy, Urothelial tumors.

6. Male Genital Tract:

Testicular Tumors, Carcinoma of Penis, BPH, Carcinoma of Prostate, Prostatitis.

7. Female Genital Tract:

Carcinoma of Cervix and Endometrium, Leiomyoma and Leiomyosarcoma, Ovarian Tumors, Gestational Trophoblastic Neoplasms, Cervicitis, Endometriosis, adenomyosis, Endometrial hyperplasia.

8. Breast:

Benign breast diseases, Carcinoma of Breast, Gynecomastia.

9. Endocrine systems:

Classify thyroid Swellings, Thyrotoxicosis, Hypothyroidism, diabetes Mellitus, Hyperparathyroidism, Pancreatic Cancer, adrenal insufficiency, Cushing syndrome, Adrenal Neoplasms.

10. Bone and soft Tissue:  
Osteomyelitis, Bone Tumors, Soft Tissue tumors, Paget's disease of Bone, Rheumatoid Arthritis.
11. Skin:  
Squamous cell carcinoma of skin, basal Cell carcinoma, Melanoma,.
12. Central Nervous Systems:  
CSF finding in meningitis, CNS Tumors, Retinoblastoma