

## **PATHOLOGY PAPER – 01 IMPORTANT TOPICS**

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### **Cell Injury and Adaptation**

- Necrosis
- Apoptosis
- Calcifications
- Types of degeneration
- Intracellular accumulation
- Metaplasia
- Fatty change
- Hyperplasia
- Dysplasia
- Reversible cell injury
- Anaplasia
- Pigments
- Dry and wet gangrene
- Atrophy
- Hypertrophy
- Cellular ageing

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### **Inflammation**

- Acute inflammation
- Chemical mediators of acute inflammation
- Repair and wound healing
- Giant cells
- Granulomatous inflammation
- Phagocytosis
- Vascular events
- Chemokines
- Cytokines
- Arachidonic pathway
- TB
- Acute phase reactants
- Exudate vs Transudate

## **Hemodynamic Disorders**

- Edema
  - Thrombosis
  - Shock
  - Thromboembolism
  - Septic shock
  - Fat embolism
  - Red infarct
  - Fate of thrombus
  - Lines of Zahn
  - Gamna Gandy bodies
  - Infarct morphology
  - Caisson disease
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## **Genetics**

- Turner syndrome
  - Klinefelter syndrome
  - Down syndrome
  - X-linked disorders
  - Marfan syndrome
  - G6PD
  - Gaucher's disease
  - Single gene disorders
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## **Immunology**

- Amyloidosis
- SLE
- Graft rejection
- Hypersensitivity reaction
- Immunodeficiency disorders
- Major histocompatibility complex
- Bence Jones protein
- Graft versus host diseases
- Amyloid reactions
- Sago spleen

## **Neoplasia**

- Neoplasia
  - Chemical Carcinogenesis
  - Physical Carcinogenesis
  - Biological Carcinogenesis
  - Spread of tumors
  - Difference between Benign and Malignant Tumors
  - Metaplasia
  - Warburg effect
  - Lab diagnosis of cancer
  - FNAC
  - Grading and staging of tumor
  - In situ carcinoma
  - Dysplasia
  - Hamartoma
  - P53
  - Tumor Markers
  - Retinoblastoma
  - Alpha fetoprotein
  - Oncogenic viruses
  - Trousseau Sign
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## **Infectious Diseases**

- Gangrene
- Gas gangrene
- Typhoid Ulcer
- Tuberculosis
- Actinomycosis
- Leprosy (Lepromatous leprosy - Microscopic appearance)
- Hematocrit of dengue fever
- Mycetoma
- Black water fever
- Negri Bodies

### **Diseases of Infancy and Childhood**

- Wilm's tumor
- Neuroblastoma
- Erythroblastosis fetalis
- Cystic fibrosis
- Neonatal respiratory distress syndrome

### **Environmental and Nutritional Diseases**

- Vitamin deficiency
- Wilson disease
- Obesity
- Silicosis
- PEM (Protein Energy Malnutrition)

### **RBC and Bleeding Disorders**

- Sickle cell anemia
- Megaloblastic anemia
- $\beta$ -Thalassemia major
- Hemorrhagic disorders
- Thrombocytopenia
- Multiple myeloma
- Hemolytic anemia
- Iron deficiency anemia
- ITP (Idiopathic Thrombocytopenic Purpura)
- Polycythemia vera
- Pancytopenia
- Rouleaux reactions
- Heinz bodies

## **Bleeding Disorders**

- DIC
  - Hemolytic anemia (classification)
  - VWD (Von Willebrand Disease)
  - Polycythemia vera
  - ESR
  - Coomb's test
  - Anticoagulants
  - Red cell indices
  - Henoch-Schonlein Purpura
  - Osmotic fragility test
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## **WBC Disorders**

- Multiple myeloma
- ALL (Acute Lymphoblastic Leukemia)
- AML (Acute Myeloid Leukemia)
- Leukemia
- CML (Chronic Myeloid Leukemia)
- Hodgkin's lymphoma (classification)
- Non-Hodgkin lymphoma
- FAB classification of leukemia
- Rye's classification
- Eosinophilia
- Leukemoid reaction
- Reed-Sternberg cell
- Diff Hodgkin & Non-Hodgkin lymphoma
- Agranulocytosis
- Defects in WBC function

**Platelet Disorders**

- DIC
  - Hemophilia
  - VWD (Von Willebrand Disease)
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**Blood Banking**

- Coombs test
- Blood transfusion reactions
- Bombay blood group
- Bleeding time
- Clotting time
- ESR
- Heat coagulation test
- Esbach's urinometer
- PAP smear
- Exfoliative cytology

## **PATHOLOGY PAPER – 02 IMPORTANT TOPICS**

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### **Blood Vessels**

- Atherosclerosis
- Vasculitis
- Dissecting Aneurysms
- Buerger disease
- Takayasu arteritis
- Kaposi Sarcoma
- Raynaud Phenomenon
- Hypotension
- Claudication

### **CVS (Heart)**

- Infective endocarditis
- Rheumatic fever
- Myocardial Infarction
- Heart vegetations
- Cardiomyopathy
- Tetralogy of Fallot

### **Lung**

- Emphysema
- Pneumonia
- Small cell CA of lung
- Bronchiectasis
- Lobar Pneumonia
- Bronchial Asthma
- Asbestosis
- Oat cell CA
- Squamous cell CA
- Pan acinar emphysema
- Sarcoidosis
- Reid's Index
- Basal cell CA of lung
- ARDS
- Carcinoid tumor of lung

## **Head and Neck**

### **Salivary glands**

- Keloid tumor
- Thyroglossal cyst (crossed out)
- Salivary adenoma
- Malignant tumors of salivary gland
- Site of oncocytoma
- Precancerous oral lesions
- Adamantinoma jaw

## **GIT**

- Ulcerative colitis / IBD
- Crohn's disease
- Peptic ulcer
- Barrett's esophagus
- Early gastric carcinoma
- Hirschsprung disease
- Colorectal carcinoma
- Zollinger Ellison syndrome
- Gastric carcinoma
- Malabsorption syndrome
- Intestinal polyps
- Peutz-Jeghers polyp features
- Diverticulosis
- Cobble stone appearance
- Appendicitis microscopic appearance
- FAP syndrome

## **Liver, Gall Bladder, Pancreas**

- Cirrhosis
- Portal cirrhosis (Portal Hypertension)
- Tumors of Liver
- Viral Hepatitis and Serological evaluation
- Fatty liver
- Gall stones
- Acute Pancreatitis
- Wilson disease
- Hepatitis – Acute vs Chronic
- Mallory bodies
- Post-mortem change of Cirrhosis of liver



## **Kidney**

- Nephrotic Syndrome
- Nephritic Syndrome
- Chronic Pyelonephritis
- Post streptococcal glomerulonephritis
- Polycystic kidney diseases
- Alport Syndrome
- Proteins in urine
- Acute Tubular Necrosis
- Cystic lesions of kidney
- Clear cell carcinoma
- Urothelial Malignancy
- Casts in urine

## **MGT (Male Genital Tract)**

- Seminoma
  - Testicular Tumor
    - Classification
  - Cryptorchidism
  - BPH
  - Bowen's Disease
  - Adenocarcinoma of Prostate
  - Transitional cell CA Bladder
  - Spermatocytic Seminoma
  - Teratoma
  - Condyloma Acuminatum
  - UB Congenital anomalies
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## **FGT (Female Genital Tract)**

- Sex cord tumors
- Germ cell ovarian tumors
- Surface epithelial tumors of ovary
- Ovarian neoplasm
- Cervical cancer
- Leiomyoma (M.F.)
- Adenomyosis
- Endometriosis
- Choriocarcinoma
- Cervical cancer – lab diagnosis
- Brenner's tumor
- Uterine leiomyoma
- Hydatidiform mole

## **Breast**

- Carcinoma of Breast
  - Paget disease of Breast
  - Phyllodes tumor
  - Fibroadenoma Breast
  - CA Breast types
  - CA Breast risk factors
  - Comedo carcinoma of Breast
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## **Skin**

- Basal cell Carcinoma of skin
  - Malignant Melanoma
  - Blue Nevus
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## **Endocrine System**

- Diabetes Mellitus
  - Papillary Carcinoma of thyroid
  - Medullary Carcinoma of thyroid
  - Graves' disease
  - Hashimoto Thyroiditis
  - Diabetic Nephropathy
  - Pheochromocytoma
  - MEN 1, MEN 2
  - Diabetic Retinopathy
  - DM lab diagnosis
  - Psammoma Bodies
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## **Bones and Joints**

- Osteosarcoma
- Osteoclastoma
- Ewing's sarcoma
- Gout
- Osteomyelitis
- Giant Cell Tumor
- Pannus
- TB Osteomyelitis
- Osteochondroma
- Pott's spine

## **CNS and Eye**

- Brain tumors
- Glioma
- Meningioma
- TB Meningitis
- CSF Examination
- Acute Pyogenic Meningitis
- Medulloblastoma
- Negri Bodies
- Prion diseases
- Flexner-Wintersteiner Rosettes and Pseudorosettes