

# DEPTH OF BIOLOGY

## Unit-1

Basic principles of Cell injury and Adaptation:

Introduction, definitions, Homeostasis, Components and Types of Feedback systems,

Causes of cellular injury, Pathogenesis (Cell membrane damage, Mitochondrial damage,

Ribosome damage, Nuclear damage), Morphology of cell injury– Adaptive changes (Atrophy, Hypertrophy, hyperplasia, Metaplasia, Dysplasia),

Cell Size ↓    Cell Size ↑    No. of Cell ↑↑        Here Cell Grow abnormally in Size, Shape.

Cell swelling, Intra cellular accumulation, Calcification, Enzyme leakage and Cell Death Acidosis

& Alkalosis, Electrolyte imbalance

# DEPTH OF BIOLOGY

Basic mechanism involved in the process of inflammation and repair:  
Introduction, Clinical signs of inflammation, Different types of Inflammation,

Mechanism of Inflammation– Alteration in vascular permeability and blood flow,  
migration of WBC's,

Mediators of inflammation,Basic principles of wound healing in the  
skin, Pathophysiology of Atherosclerosis.

# DEPTH OF BIOLOGY

*10/15 Marks*

Q.1 Define basic principle of cell injury & their adaptation ?

Q.2 Explain inflammation, its mechanism, types & mediators of inflammation ?

*5/7 Marks*

Q.1 Define adaptive changes during cell injury ?

Q.2 Write short note on mediators of inflammation ?

Q.3 Explain the basic principles of wound healing in the skin ?

# DEPTH OF BIOLOGY

*2/3/ Mcq*

Q.1 What is atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia ?

Q.2 Define intracellular accumulation ?

Q.3 What is calcification ?

Q.4 Define Homeostasis ?

Q.5 Clinical signs of inflammation ?

Q.6 Causes of Cell injury ?

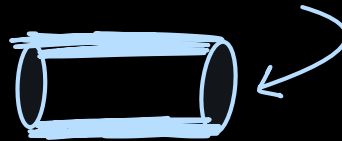
Q.7 Mediators involved in inflammation ?

# DEPTH OF BIOLOGY

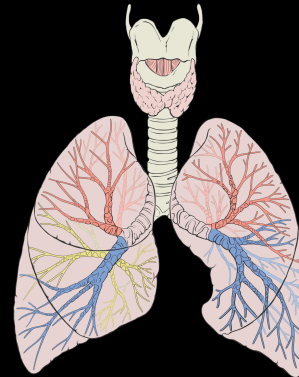
## Unit-2

- Cardiovascular System:

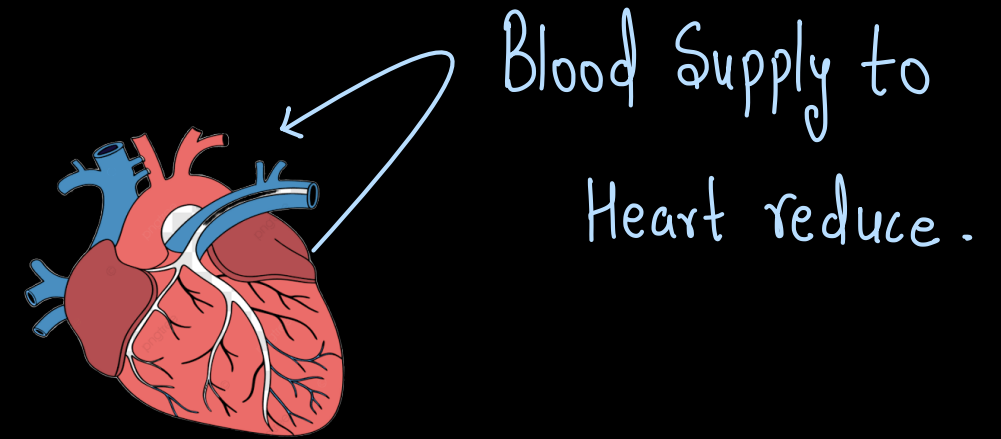
Hypertension, congestive heart failure, ischemic heart disease (angina, myocardial infarction, atherosclerosis and arteriosclerosis)



-Respiratory system: Asthma, Chronic obstructive airways diseases.



-Renal system: Acute and chronic renal failure



# DEPTH OF BIOLOGY

*10/15 Marks*

Q.1 Give a detail note on myocardial infarction ?

Q.2 Explain congestive heart failure ?

*5/7 Marks*

Q.1 Explain Asthma ?

Q.2 Difference b/w Acute & Chronic Renal failure ?

# DEPTH OF BIOLOGY

*2/3/ Mcq*

Q.1 Define Hypertension ?

Q.2 Define atherosclerosis. ?

Q.3 Define arteriosclerosis ?

Q.4 Explain COPD ?

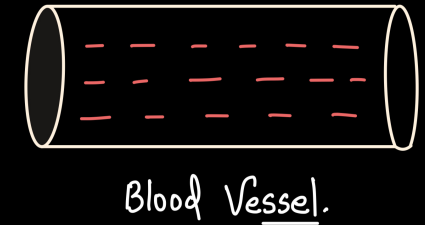
Q.5 DEFINE ISCHEMIC HERAT DISEASE ?

# DEPTH OF BIOLOGY

## Unit-3

### Haematological Diseases:

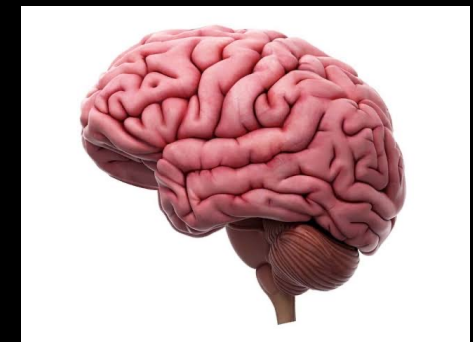
Iron deficiency, megaloblastic anemia (Vit B12 and folic acid), sickle cell anemia, thalassemia, hereditary acquired anemia, hemophilia



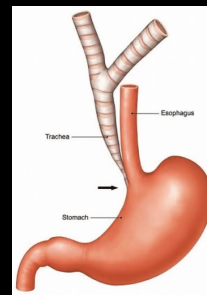
-Endocrine system: Diabetes, thyroid diseases, disorders of sex hormones



-Nervous system: Epilepsy, Parkinson's disease, stroke, psychiatric disorders: depression, schizophrenia and Alzheimer's disease.



-Gastrointestinal system: Peptic Ulcer





# DEPTH OF BIOLOGY

*10/15 Marks*

Q.1 Give a detail note on Diabetes ?

Q.2 Explain Iron deficiency Anemia / Sickle Cell Anemia ?

Q.3 Give a note on Alzheimer's disease ?

Q.4 Write a detailed note on Parkinson's disease ?

# DEPTH OF BIOLOGY

*5/7 Marks*

Q.1 Write a short note on Epilepsy ?

Q.2 Explain Depression & its types ?

*2/3/ Mcq*

Q. 1 Define Stroke ?

Q.2 Explain Schizophrenia ?

Q.3 Define Peptic Ulcer ?

Q.4 Define Anemia ?

# DEPTH OF BIOLOGY

## Unit-4

LIVER

- Inflammatory bowel diseases, jaundice, hepatitis (A,B,C,D,E,F) alcoholic liver disease.

-Disease of bones and joints: Rheumatoid arthritis, osteoporosis and gout.  
Autoimmune.

1. Fibrous



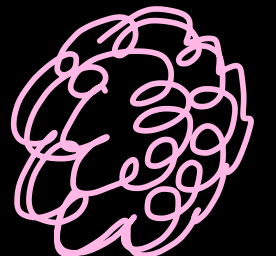
2. Cartilaginous Joints



3. Synovial Joint



-Principles of cancer: classification, etiology and pathogenesis of cancer.



# DEPTH OF BIOLOGY

*10/15 Marks*

Q.1 Explain Hepatitis [ A,B,C,D,E,F] ?

Q.2 Give a detail note on Rheumatoid Arthritis ?

Q.3 Define Cancer , Write down its etiology classification & Pathogenesis of Cancer ?

*5/7 Marks*

Q.1 Define Osteoporosis ?

Q.2 Explain Jaundice ?

# DEPTH OF BIOLOGY

*2/3 MCQ*

Q.1 Define Gout ?

Q.2 Define Alcoholic Liver Disease ?

Q.3 Explain Hepatitis ( A & C ) ?

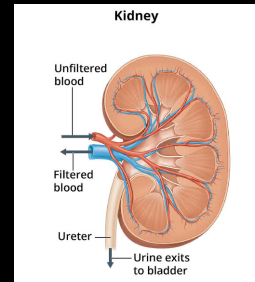
# DEPTH OF BIOLOGY

## Unit-5

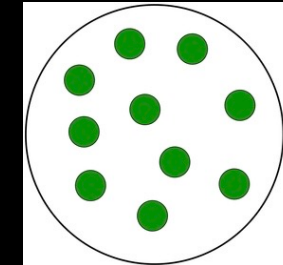
-Infectious diseases: Meningitis, Typhoid, Leprosy, Tuberculosis



-Urinary tract infections



-Sexually transmitted diseases: AIDS, Syphilis, Gonorrhea



# DEPTH OF BIOLOGY

*10/15 Marks*

Q.1 Give a detailed note on Tuberculosis (T.B) ?

Q.2 Explain A.I.D.S ?

*5/7 Marks*

Q.1 Explain Meningitis ?

Q.2 Write a short note on Syphilis ?

*2/3/MCQ*

Q.1 Define Leprosy ?

Q.2 Explain Gonorrhoea ?