

DEPTH OF BIOLOGY

B. PHARMACY

2 SEM IMPORTANT QUESTIONS

**HUMAN ANATOMY &
PHYSIOLOGY**

- **Nervous system**

Organization of nervous system, neuron, neuroglia, classification and properties of nerve fibre, electrophysiology, action potential, nerve impulse, receptors, synapse, neurotransmitters.

Central nervous system: Meninges, ventricles of brain and cerebrospinal fluid. structure and functions of brain (cerebrum, brain stem, cerebellum), spinal cord (gross structure, functions of afferent and efferent nerve tracts, reflex activity)

10 MARKS

1. Short note on structure & function of brain [cerebrum, cerebellum, brain stem]

5 MARKS

1. Classification & properties of nerve fibre
2. Explain spinal cord

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5 MARKS

1. Short note on electrophysiology
2. Short note on ventricle of brain

2 MARKS

1. Define neuroglia
2. Define action potential
3. Define nerve impulse
4. Define synapse
5. Explain neurotransmitter
6. What is meninges
7. Write down the use of CSF

- **Digestive system**

Anatomy of GI Tract with special reference to anatomy and functions of stomach, (Acid production in the stomach, regulation of acid production through parasympathetic nervous system, pepsin role in protein digestion) small intestine and large intestine, anatomy and functions of salivary glands, pancreas and liver, movements of GIT, digestion and absorption of nutrients and disorders of GIT.

- **Energetics**

Formation and role of ATP, Creatinine Phosphate and BMR.

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10 MARKS

1. Anatomy of GIT & its function

5 MARKS

1. Define acid production in the stomach
2. Define regulation of acid production through PNS
3. Write down the role of pepsin in protein digestion
4. Short note on small & large intestine
5. Write down the anatomy & function of salivary gland
6. Structure and function of liver

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2 MARKS

1. Role of pancreas in digestion
2. What is BMR?
3. Moments of GIT
4. Disorders of GIT
5. Role of ATP

Unit III

- **Respiratory system**

10 hours

Anatomy of respiratory system with special reference to anatomy of lungs, mechanism of respiration, regulation of respiration

Lung Volumes and capacities transport of respiratory gases, artificial respiration, and resuscitation methods.

- **Urinary system**

Anatomy of urinary tract with special reference to anatomy of kidney and nephrons, functions of kidney and urinary tract, physiology of urine formation, micturition reflex and role of kidneys in acid base balance, role of RAS in kidney and disorders of kidney.

10 MARKS

1. Anatomy of respiratory system with special reference to lung anatomy
2. Anatomy of urinary tract with special reference to anatomy of kidney or nephron

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5 MARKS

1. Mechanism of respiration
2. Short note on regulation of respiration
3. Short note on physiology of urine formation
4. Short note on role of kidney in acid base balance
5. Explain RAS system in kidney

2 MARKS

1. Lung volumes [TV+IRV+ERV]
2. Artificial respiration

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2 MARKS

3. Define resuscitation method
4. Function of kidney
5. Function of urinary tract
6. Micturition reflex?
7. Note on disorder of kidney

- **Endocrine system**

Classification of hormones, mechanism of hormone action, structure and functions of pituitary gland, thyroid gland, parathyroid gland, adrenal gland, pancreas, pineal gland, thymus and their disorders.

10 MARKS

1. Write structure & functions of following glands-
 - a. Pituitary
 - b. Thyroid
 - c. Pancreas
 - d. adrenal

- **Reproductive system**

Anatomy of male and female reproductive system, Functions of male and female reproductive system, sex hormones, physiology of menstruation, fertilization, spermatogenesis, oogenesis, pregnancy and parturition

- **Introduction to genetics**

Chromosomes, genes and DNA, protein synthesis, genetic pattern of inheritance

5 MARKS

1. Write a short note on spermatogenesis & oogenesis
2. Write a short note on menstrual cycle/ physiology of menstrual cycle
3. Short note on protein synthesis

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2 MARKS

1. What is fertilization
2. Define gene/chromosome
3. Define parturition
4. Write structure & function of DNA