

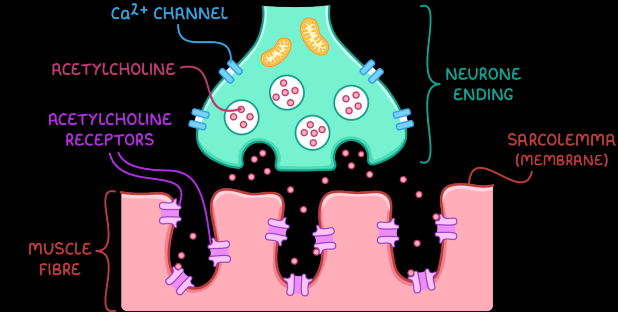
DEPTH OF BIOLOGY

Unit-1

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)



DEPTH OF BIOLOGY

10/15 Marks

Q.1 Give a detail note on structure & Functions of Brain (Cerebrum, Cerebellum, Brain stem). ?

5/7 Marks

Q.1 Explain electrophysiology of Neuron ?

Q.2 Give a short note on Classification & Properties of Nerve fibre ?

Q.3 Give a detail note on Spinal cord ?

Q.4 Explain Brain ventricles ?

2/3/Mcq.

Q.1 Define Neuroglia ?

Q.2 Define Action potential ?

Q.3 Explain Nerve impulse & Receptor ?

Q.4 Define Synapse & Synaptic Cleft ?

Q.5 Explain Neurotransmitter & give any two examples ?

Q.6 Explain Meninges ?

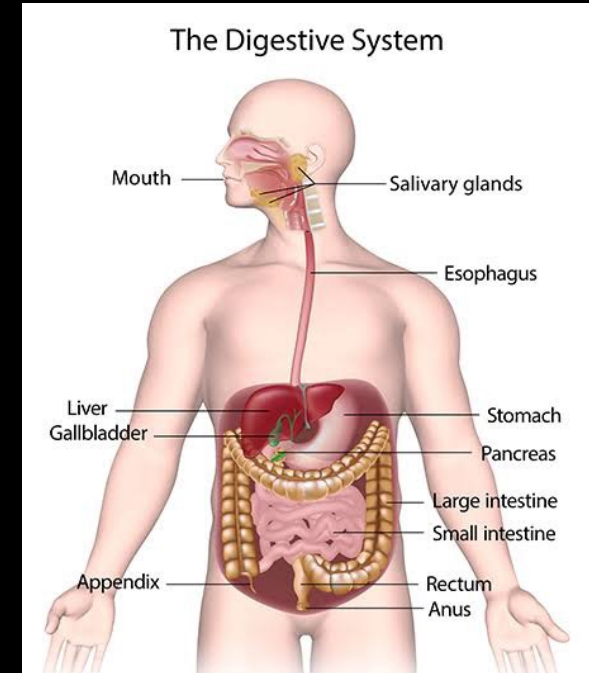
Q.7 What are the various uses of CSF ?

DEPTH OF BIOLOGY

Unit-2

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.

DEPTH OF BIOLOGY

10/15 Marks

Q.1 Give a detailed explanation of Anatomy of GIT & It's Functions ?

5/7 Marks

Q.1 Define acid production in stomach & regulation by PNS

Q.2 Write down the role of pepsin in Protein digestion ?

Q.3 Give a detailed note on Structure & Functions of Liver ?

Q.4 Write down the Anatomy & Functions of Salivary gland ?

DEPTH OF BIOLOGY

2/3/ Mcq

Q.1 Role of pancreas in Digestion ?

Q.2 Define BMR ?

Q.3 Moments of GIT ?

Q.4 Name any 4 Disorders of GIT ?

Q.5 Role of ATP ?

Q.6 Define Creatinine Phosphate ?

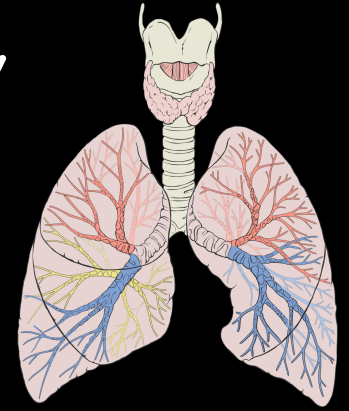
DEPTH OF BIOLOGY

Unit-3

Respiratory system

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

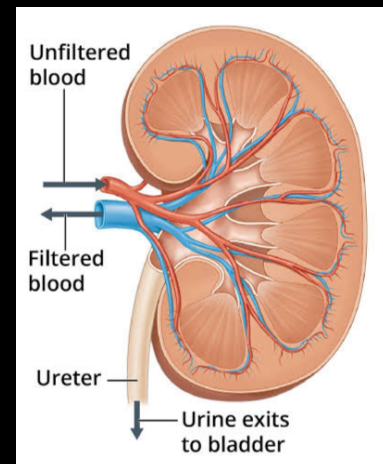


Urinary system

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.



DEPTH OF BIOLOGY

10/15 Marks

Q.1 Give a detail note on Anatomy of respiratory system with special reference to lung ?

Q.2 Explain Anatomy of urinary tract with special reference to anatomy of kidney or nephron ?

DEPTH OF BIOLOGY

5/7 Marks

Q.1 Explain the mechanism of Respiration & its regulation ?

Q.2 Write a short note on Physiology of Urine formation ?

Q.3 Explain the role of kidney in acid base balance ?

Q.4 Define RAAS mechanism ?

DEPTH OF BIOLOGY

2/3/ Mcq

Q.1 Lung volumes [TV+IRV+ERV] ?

Q.2 Define Artificial respiration ?

Q.3 Define resuscitation method ?

Q.4 Mentions the functions of kidney ?

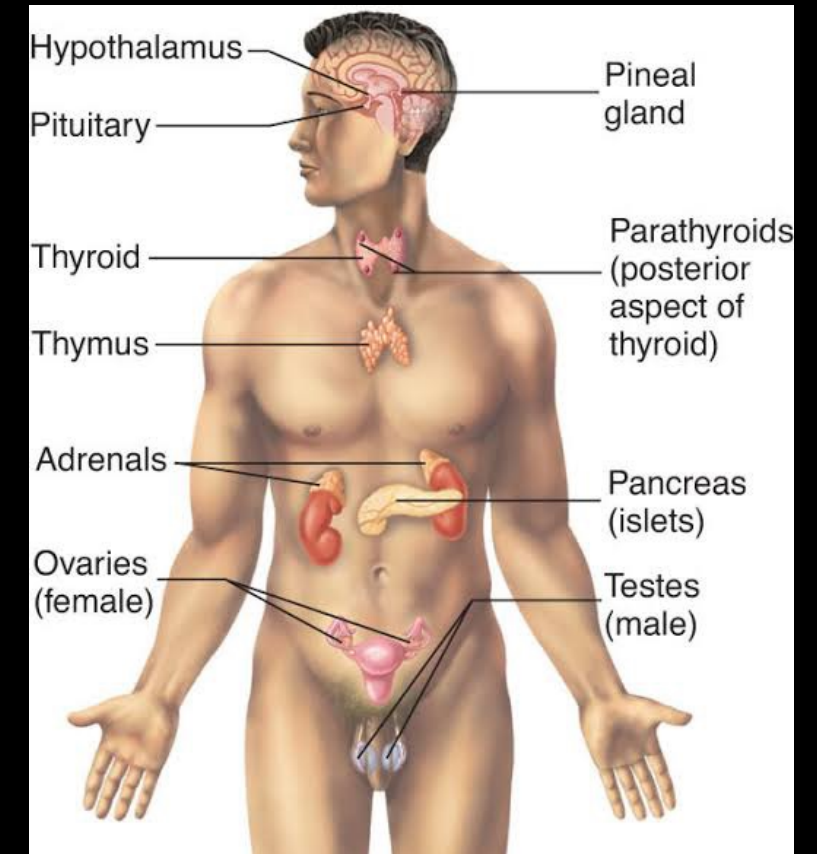
Q.5 What is Micturition reflex ?

Q.6 Write any 4 disorders of kidney ?

Unit-4

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



DEPTH OF BIOLOGY

5/7 Marks

Q.1 Write down the structure & functions of following glands ?

a. Pituitary

b. Thyroid

c. Pancreas

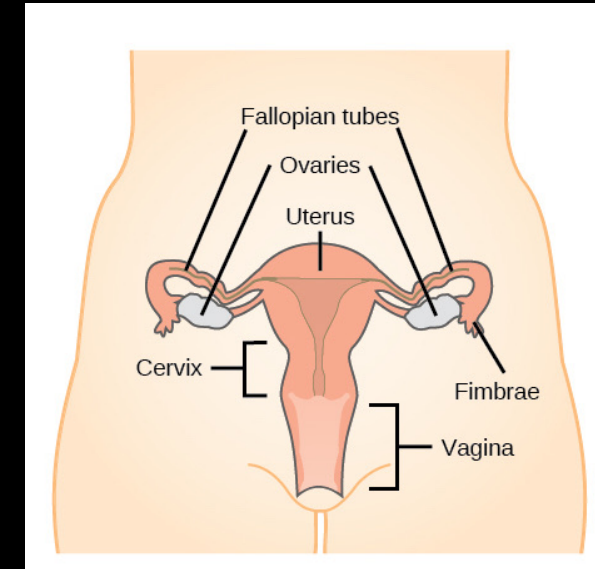
d. Adrenal

DEPTH OF BIOLOGY

Unit-5

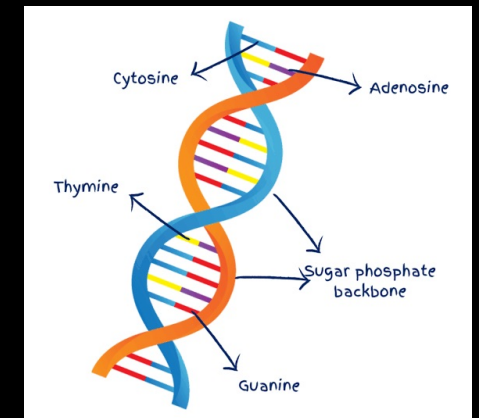
Reproductive system-

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



DEPTH OF BIOLOGY

(Rarely 10/15 Marks)

Q.1 Anatomy of male and female reproductive system, Functions of male and female ?

DEPTH OF BIOLOGY

5/7 Marks

Q.1 Write a short note on spermatogenesis & Oogenesis ?

Q.2 Give a detailed explanation on Menstrual Cycle or Physiology of MC ?

2/3/Mcq

Q.1 Define fertilization ?

Q.2 Define Chromosome / gene ?

Q.3 Define Parturition ?

Q.4 Explain the structure & Functions of DNA ?