

N. B:-

- 1) Question No. 1 is compulsory.
- 2) Attempt any **three** questions out of remaining **five** questions.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data if necessary, stating your assumption.
- 5) Answers to questions should be grouped together.

SOLUTION.

Q.No.1		Attempt any four	Marks
	A	Accessory organs of digestive system.	5
	B	Conduction System of Heart.	5
	C	Structure of Neuron.	5
	D	Spermatogenesis.	5
	E	Explain the steps of coagulation.	5
Q.No.2	A	List the endocrine glands & state their secretion and functions.	08 12
	B	Lung Volume and Capacities.	12 08
Q.No.3	A	Draw & explain the lobes of cerebrum. Also state functions of lobes.	10
	B	Formation of urine.	10
Q.No.4	A	Draw labeled diagram of human cell & explain functions of any four important organelles.	10
	B	Explain with a neat diagram generation of a action potential.	10
Q.No.5	A	Structure and function of stomach and composition of gastric juice.	10
	B	Explain the Structure on inner ear and mechanism of hearing with neat diagram.	10
Q.No.6		Attempt any four	
	A	Muscles of Respiration.	5
	B	Muscle tissue.	5
	C	Write short note on reflex arc.	5
	D	Explain the composition of Blood.	5
	E	Functions of skin.	5

Q.No.1	Attempt any four	Marks
	A Accessory organs of digestive system. -Explanation and functions of following accessory organs: Pancreas,liver, biliary tract, 3 pairs of salivary glands (parotid, submandibular, sublingual)	5
	B Conduction System of Heart. - Diagram showing natural pacemakers of the heart (SA node, AV node, purkinje fibers and bundle of HIS) [03] -Explanation and functions of each natural pacemaker of heart.[02]	5
	C Structure of Neuron. -Diagram showing cell body ,axons and dendrites [02] -Explanation about the diagram[03]	5
	D Spermatogenesis. -Diagram of longitudinal section of a testis and deferent duct [02] -Explanation of how sperms are generated. [03]	5
	E Explain the steps of coagulation. -Flowchart of intrinsic and extrinsic pathways [02] -Explanation[03]	5
Q.No.2	A List the endocrine glands & state their secretion and functions Hormones and functions of those hormones secreted by following endocrine glands:Pituitary gland, hypothalamus, thyroid gland, parathyroid glands, adrenal glands, pancreatic islets, pineal gland, thymus gland.	12
	B Lung Volume and Capacities. Draw graph and all definitions.	08
Q.No.3	A Draw & explain the lobes of cerebrum. Also state functions of lobes. -Draw diagram showing all lobes frontal,parietal,occipital,temporal and explain functions of each lobe in detail.	10
	B Formation of urine. -Draw diagram and explain filtration. - Hormone influence on selective reabsorption -Tubular secretion -Composition of urine.	10
Q.No.4	A Draw labeled diagram of human cell & explain functions of any four important organelles. -Draw cell and each organelle in detail that is being explained.	10
	B Explain with neat diagram generation of nerve action potential -Draw the cycle and graph. -Explain all phases. (rmp, depolarization, repolarization, hyperpolarization, refractory period, absolute refractory period)	10

- Q.No.5 A Structure and function of stomach and composition of gastric juice. 10
- Diagram and explanation
- Functions of stomach with composition of gastric juice
- B Explain the Structure on inner ear and mechanism of hearing with neat diagram. 10
-Diagram showing the physiology of hearing, passage of sound waves and summary of Transmission of sound waves [04]
- Explanation of the diagram[06]
- Q.No.6 Attempt any **four**
- A Muscles of Respiration. 5
-Draw diagrams and explain diaphragm and intercostal muscles.
- B Muscle tissue. 5
-Draw and explain functions and structures of skeletal muscle, smooth muscle and cardiac muscle.
- C Write short note on reflex arc. 5
Diagram of reflex arc [02]
Explanation about reflex arc[03]
- D Explain the composition of Blood. 5
- Write about rbc, wbc, platlets and plasma with their functions and types
- E Functions of skin. 5
-List and explain functions of skin