

## Unit-1

Short :-

- 1) G-I hormones
- 2) Digestion
- 3) Ureotelic, ammonotelic, Uricotelic animals.
- 4) Counter current mechanism
- 5) Malpighian tubule
- 6) Osmoregulation
- 7) Micturition
- 8) Types of Nephron
- 9) Enzyme inhibitors

Long :-

- 1) Enzymes, classification, Mechanism
- 2) Digestion and Absorption of carbohydrates, proteins.
- 3) Digestion of cellulose in ruminants.
- 4) Structure and function of nephron.
- 5) Urine formation and countercurrent mechanism.
- 6) Water and ionic regulation in fresh, Brackish and Marine animals.

## Unit - 2

Short :-

- 1) Homeostasis
- 2) Respiratory pigment
- 3) Clari chloride shift
- 4) Bohr effect.
- 5) Neuro, Myogenic heart
- 6) Bradycardia
- 7) Tachycardia
- 8) Glycolysis
- 9) Kreb's cycle

Long:-

- 1) Respiration - Mechanism, Nervous and chemical regulation.
- 2) Homeostasis - Mechanism with example.
- 3) Transport of  $O_2$  and  $CO_2$ .
- 4) Double circulation in mammals. [open and closed / Types of Heart].
- 5) Blood clotting Mechanism
- 6) Regulation of Heart Beat.

## Unit - 3

Short :-

- 1) Skeletal Muscle
- 2) Cardiac Muscle
- 3) Smooth Muscle
- 4) Treppe fatigue
- 5) Twitch
- 6) Tetanus
- 7) Neuron
- 8) Synapse
- 9) Neuro transmitters
- 10) Resting, Action, Threshold potential.
- 11) Secondary Messengers
- 12) Parathyroid gland
- 13) EPSP, IPSP.

Long :-

- 1) Ultrastructure of Muscle fibre
- 2) Sliding filament theory.
- 3) Transmission of nerve impulses
- 4) Synaptic Transmission (Direct & Indirect)
- 5) Structure, function, secretion - pituitary gland, Thyroid, Adrenal, Pancreas.
- 6) Concept of Secondary Messengers and Hormonal action (peptide, steroid hormones)
- 7) Hormonal control of menstrual cycle in human beings.

## Unit-4

short :-

- 1) Behaviour
- 2) Reflexes
- 3) Tropism
- 4) Habituation
- 5) Imprinting
- 6) Pheromones
- 7) Biological clock
- 6) Circadian rhythms, Circannual rhythms
- 7) Circumlunar rhythms.

Long:-

- 1) Animal Behaviour - Types of Behaviour
- 2) Classical conditioning theory
- 3) Instrumental conditioning theory
- 4) Ivan Pavlov's Experimental Theory on dog.
- 5) Colonial existence of Bees and termites
- 6) Trial and error learning theory.