QUESTION BANK

FAQ on Nervous System

Essay

- Classification of neurotransmitters
- Synaptic anatomy and transmission
- Physiological anatomy, of neuron with its classification
- Cytoarchitecture of cerebral cortex
- Functional division with their peculiarities of cerebral cortex
- Motor functions of cerebellum
- Reflex activities of brain stem
- Visceral motor activities of Pons & Medulla
- Functions of Thalamus
- Hypothalamic functions
- Cross section of spinal cord
- Specific functions of spinal tracts
- Functional capabilities of Autonomic nervous system
- Physiology of vision
- Physiological anatomy of Ear and mechanism of hearing
- Postural reflexes
- Detailed scheme of stretch reflex
- Basic physics and existence of membrane potential
- Generation of action potential in a neuron
- Reflex activities of spinal cord
- Maintenance of Pasture and Equilibrium role of ear.

Short notes

- Limbic system
- Significance of peripheral nervous system
- Cranial nerves
- Nuclei of spinal cord
- Visceral reflexes
- Sleep
- Olfactory Physiology
- Gustatony reflex
- Reflex arc- type and properties
- Conditioned reflex-properties
- Electroencephalogram and its significance
- Errors in vision
- Decrebrate rigidity
- Spinal shock
- Spinal animal
- Thalamic animal
- Decortical preparation
- Channel of ion transport
- Pineal Physiology-Neural aspect
- Types of vision with examples for each type
- Basal ganglia and its importance
- Cerebro spinal fluid-Production, Function and drainage / Supporting cells of nervous system
- Electrophysiology of vision

- Structure involved in overall motor control
- Receptors and their classification
- Physiological anatomy of equilibrium
- Taste
- Buds and their distribution

FAQ on Digestion

Essay

- Pattern of salivary secretion and factors controlling them
- Phases of Gastric acid secretion and factors modifying them
- Pancreatic secretions and functions
- Formation and functions of bile
- Exocrine pancreas-role in digestion
- Enteric nervous system and its significance
- Phases of digestion
- Digestion of carbohydrate in monogastric animal
- Protein digestion in a monogastric animal
- Digestion of lipids in a monogastric animal
- Physiological anatomy of ruminant stomach
- Rumen microbes - Their role in anerobiosis
- Classification of rumen bacteria with two examples each
- Scheme of ruminoreticular motility and their significance
- Anatomical physiology of villi
- Ruminant carbohydrate digestion
- Ruminant protein digestion
- Carbohydrate absorption in intestine

- Protein absorption in Intestine
- Lipid-mode of absorption and significance
- Avian digestion
- Importance of cecum in equines
- Enteric endocrine secretions

Short notes

- Classification and significance of rumen ciliates
- Rumen fungi and their importance
- Peristalsis and segmentation
- Functions of saliva in ruminant and monogastric animals
- Large intestine functions
- Protected proteins in ruminants
- Eructation mechanism
- Bloat
- Functions of bile
- Enterogastric reflex
- Enterohepatic circulation of bile
- Anatomical difference in digestive organs of canine, bovine and Avian species.
- Act of swallowing
- Prehension and salivation
- Process of mastication in various animals
- Foregut digesters
- Hind gut digesters
- End products of mongastric digestion in large intestine
- Development of rumen

- Esophageal groove reflex
- Functions of liver-Digestive role

FAQ on Muscle Physiology

Essay

- Describe in detail the electron microscopic structure of skeletal muscle
- Muscle metabolism-Energetics
- Excitation contraction coupling
- Smooth muscle physiology
- Isometric and Isotonic muscle contraction
- Neuromuscular junction and physiological action of muscle contraction
- Properties of skeletal muscular contraction
- Propagation of action potential in a skeletal muscle
- Pattern of action potential generation in smooth muscle
- Different type of muscle fibers based on their energy demand
- Mechanism of muscle contraction

Short notes

- Rigor mortis
- Cori's cycle
- Red muscle
- White muscle
- Slow twitch muscles
- Gating channel
- Types of skeletal muscle fiber

- Refractory period
- Muscle fatigue
- Tetanization
- Types of smooth muscles
- Myoglobin and its significance
- Clonus Vs tonus
- Contracture Vs contraction
- Fast oxidative, glycolytic fibers (FOG fibers)

FAQ on Respiration

Essay

- Transport of O_2
- Transport of CO_2
- O_2-Dissocation curve and its significance
- Neural regulation of respiration
- Respiratory centres
- Herring Bruer's reflex
- Respiratory adjustments of acid-base balance
- Non respiratory functions of lungs
- Spirometric evaluation of lung volumes and lung capacities
- Basic mechanism of gas exchange

Short notes

- Bohr’s effect
- Hamberger’s shift
- Haldane’s effect
- Tidal volume
- Respiratory Quotient