

QUESTION BANK

HAP

I Pharm D 26-7-2016

CHAPTER 1. Scope of anatomy and physiology, basic terminologies used in this subject. (description of the body as such planes and terminologies)

SHORT ESSAYS (2M)

1. Define Anatomy and Physiology.
2. Define anatomical position, sagittal plane.
1. 3. Mention the descriptive terms used in Anatomy.

CHAPTER 2. STRUCTURE OF CELL-ITS COMPONENTS AND THEIR FUNCTIONS.

SHORT ESSAY (5M)

1. Explain the structure and functions of cell membrane.**
2. Describe the functions of Golgi complex and mitochondria.
3. Mention different cell organelles with their functions.
4. Distinguish between rough and smooth endoplasmic reticulum (ER). What are the functions of ER?
5. Discuss the structure and functions ribosomes and lysosomes.
6. Draw a neat labeled diagram of cell and write the functions of nucleus.

SHORT ANSWERS (2M)

1. Write the functions of mitochondria.
2. Explain the functions of plasma membrane.
3. Why are mitochondria referred to as “power houses” of the cell?
4. Why the nucleus is called the control center of the cell? Write its functions.
5. Describe a mitochondria
6. Lysosomes and chromosomes
7. Mention the components of a cell.

CHAPTER 3. ELEMENTARY TISSUES OF THE HUMAN BODY

SHORT ESSAYS (5M)

1. Classify tissues with examples.
2. Explain the differences among skeletal, smooth and cardiac muscles.
3. Define cartilage, mention its type. Give the description, function and examples of each of them.
4. Differentiate between loose and dense connective tissues.
5. Describe the different types of epithelial tissues with examples.
6. Explain the structure and functions of neuron.

SHORT ANSWERS (2M)

1. Classify muscular tissue with examples.

2. Classify connective tissue with examples.
3. Draw a neat labeled diagram of neuron.
4. Classify simple epithelium with examples.
5. Classify compound epithelium with examples.
6. Write the general characteristics of epithelial tissue.
7. Write the location and functions of Transitional epithelium.

CHAPTER 4. OSSEOUS SYSTEM

SHORT ESSAYS (5M)

1. Classify joints with examples
2. Explain the Haversian canal system of bone.
3. Write the composition and functions of bone.
4. Describe angular and special movements of joints.
5. What is synovial joint? Explain its types with examples.
6. Classify axial skeletal system with examples.
7. Classify appendicular skeletal system with examples.
8. Classify bones on the basis of shape along with examples.

SHORT ANSWERS (2M)

1. Name synovial joints
2. Classify bone marrow and functions.
3. Define an articulation.
4. Write the histology of bone
5. Name the bones of cranium
6. Name the bone cells
7. Name the bones of the face.
8. Mention the bones of the upper limb.
9. Mention the bones of the lower limb.
10. Name the bones of the vertebral column.
11. Write the functions of bone.

CHAPTER 5. HAEMOPOIETIC SYSTEM

LONG ESSAYS (10M)

1. Describe the constituents of blood and their functions.
2. Mention coagulation factors and write the mechanism of blood coagulation
3. Describe the process of Erythropoiesis and factors required or influencing erythropoiesis.

SHORT ESSAYS (5M)

1. Describe the ABO system of blood grouping.
2. Describe the structure and functions of platelets.
3. Write any eight functions of blood.
4. What is anemia ? Explain its types
5. Classify leucocytes. Mention its functions.

6. Explain the factors influencing the blood coagulation.
- 7.
8. What is basis for the Rh system? Write a note on hemolytic disease of the newborn (erythroblastosis fetalis).
9. Describe the constituents of plasma and their functions.*

SHORT ANSWERS (2M)

1. What is anemia.?How it is caused.
2. Write stages of formation of RBC
3. Write the normal values and life span of the following:
(a)Hb; (b) WBC; (c) RBC; and (d) platelets
4. Mention different types of anaemia.
5. Thrombocytopenia purpura.
6. What is polycythemia? Give its reasons.
7. Write the functions of WBC
8. Write functions of plasma proteins.
9. What is Rh factor?
10. What is the difference between plasma and serum?
11. Compare erythrocytes, leukocytes, and thrombocytes with respect to size, number per mm^3 , and life span.
12. What is hemophilia? Describe its signs and symptoms.
13. Write any four factors hastening the clotting.

CHAPTER 6. THE LYMPHATIC SYSTEM**SHORT ESSAYS (5M)**

1. Describe the anatomy and functions of spleen.
2. Write a note on lymph and its functions.
3. Identify the components and functions of lymphatic system.
4. Describe the structure of a lymph node. Write its functions.
5. Write a note on disorders of lymph and lymphatic system.

SHORT ANSWERS (2M)

1. What are lymph nodes?
2. Write about the functions of spleen.
3. Write the composition of lymph.
4. write the functions of lymph nodes
5. What is lymphoedema and splenomegaly?

CHAPTER 7. CARDIOVASCULAR SYSTEM**LONG ESSAYS (10M)**

1. Describe the internal anatomy of heart with a neat labeled diagram.

2. Define blood pressure and discuss various factors regulating the blood pressure in human being.
3. What is cardiac cycle? Describe various events of cardiac cycle.

SHORT ESSAYS (5M)

1. Explain the normal ECG with labeled diagram.
2. Explain systemic and pulmonary circulation.
3. Explain coronary and portal blood circulation.
4. Write short note on heart valves and heart sounds.
5. Explain the gross anatomy of heart
6. Discuss the factors regulating blood pressure.

SHORT ANSWERS(2M)

1. Explain heart sounds
2. Define the term -angina pectoris and myocardial infarction.
3. Define cardiac arrhythmia and cardiac arrthmia.
4. Define Atherosclerosis and Congestive cardiac failure.
5. What is cardiac output? How it is calculated.
6. Draw ECG and label deflection waves.
7. Define hypertension and hypotension.
8. Mention the factors affecting blood pressure.
9. Mention the events of cardiac cycle.
10. Mention the layers and valves of the heart.

CHAPTER 8 RESPIRATORY SYSTEM.**LONG ESSAYS (10M)**

1. What is external respiration? Explain the regulation of respiration.
2. Discuss gross anatomy of respiratory system with suitable diagram.
3. Give an account of transport of oxygen and carbon dioxide in the blood.
4. Explain the mechanism of respiration.

SHORT ESSAYS (5M)

1. Write a short note on artificial respiration.
2. Explain mechanism of breathing.
3. Internal and external respiration.
4. Describe the location and anatomy of lungs
5. Explain the lung volumes and capacities.

SHORT ANSWERS (2M)

1. Define vital capacity. Write its normal value.
2. Define hypoxia and asphyxia
3. Define oxygen therapy and resuscitation.
4. Define dysbarism and tidal volume.

5. Name the muscles of respiration.
6. Write the role of chemo receptors in respiration.

CHAPTER 9. DIGESTIVE SYSTEM

LONG ESSAYS (10M)

1. Draw a neat diagram of GI tract. Explain how fats are digested and absorbed.
2. Describe the gross anatomy of stomach. Explain its physiological functions..
3. Write the anatomy of pancreas. Discuss the endocrine and exocrine secretions of pancreas.
4. Describe the anatomy, histology and functions of small intestine and stomach.
5. Explain how digestion of carbohydrates, proteins and fats takes place.
6. Describe the anatomy of liver and mention its functions.

SHORT ESSAYS (5M)

1. List out the various enzymes present in the secretions of GIT.
2. Write composition and functions of gastric juice.
3. Name salivary glands and discuss the composition and functions of saliva.
4. Discuss the digestion of carbohydrates.
5. Discuss the food absorption in small intestine.
6. Describe the functions of liver.
7. Describe the digestion in small intestine.
8. Explain how digestion takes place in stomach.
9. Write the exocrine functions of pancreas.

SHORT ANSWERS (2M)

1. Name digestive enzymes.
2. Give functions of bile.
3. Write exocrine functions of pancreas
4. What do mean by peptic ulcer
5. Draw a neat labeled diagram of stomach
6. Name the salivary glands and functions of their secretions.*
7. Explain peristaltic movement of small intestine.
8. Mention the functions of pancreatic enzymes.
9. Write the composition of bile.
10. Mention the functions of stomach.
11. What is liver cirrhosis?

CHAPTER 10. NERVOUS SYSTEM

LONG ESSAYS (10M)

1. Describe the structure and functional areas of cerebrum.
2. Describe the origination and functions of autonomic nervous system.

3. Define Sympathetic and Parasympathetic system and discuss their anatomical and physiological differences.
4. Explain the functions of different cranial nerves.
5. Name the divisions of CNS and explain the functions of hypothalamus and cerebrum.

SHORT ESSAYS (5M)

1. Mention the anatomical location and functions of the following structures:
a). Basal ganglia. b). Thalamus.
2. What are the functions of medulla oblongata and pons.
3. Describe the meninges and ventricles in the brain?
4. What are the functions of cerebellum?
5. Define reflex action with example.
6. Describe sympathetic outflow.
7. Write effects of parasympathetic stimulation.
8. Define limbic system. Explain several of its functions.
9. Discuss the internal structure of spinal cord
10. 10 Write the composition and functions of cerebro spinal fluid (CSF).

SHORT ANSWERS (2M)

1. Enumerate the functions of hypothalamus.
2. Draw and label schematic diagram of spinal reflex arc.
3. Write main functions of cerebrospinal fluid.
4. Give a brief account of CTZ (chemoreceptor triggerzone).
5. Draw and label diagram of a neuron.
6. What is a ganglion? Give its role in nervous system.
7. What is synaptic cleft? State its function.
8. Classify nervous system.
9. Name the ventricles present in the brain.
10. What is extra pyramidal tract.
11. Write the functions of olfactory and optic nerve.

CHAPTER 11. URINARY SYSTEM**LONG ESSAYS (10M)**

1. Draw a neat, labeled diagram of nephron and describe how urine is formed?
2. Describe the structure of kidney and explain its functions.

SHORT ESSAYS (5M)

1. Write a note on Renin-Angiotensin-aldosterone system.
2. Write the structure of nephron with neat labeled diagram
3. Role of kidney in maintaining acid-base balance.
4. What are functions of kidney?
5. What is micturition? Describe the micturition reflex.

SHORT ANSWERS (2M)

1. Write significance of inulin clearance test
2. What is renal clearance test? Mention its types.
3. Define micturition

.

CHAPTER 12. ENDOCRINE SYSTEM**LONG ESSAYS (10M)**

1. Mention the hormones of pituitary gland and write the functions of each.
2. Write the synthesis, storage, release and functions of thyroid hormones.
3. Explain the physiological role of adrenal cortical hormones.
4. What are the hormones secreted by the pituitary gland? Discuss the regulation of their secretion and physiological function.
5. Define hormone. Discuss various feedback mechanisms involved in the secretion of hormones.

SHORT ESSAYS (5M)

1. Write the functions of insulin and glucagon
2. Write the functions of glucocorticoids.
3. Write a short note on parathyroid glands.
4. Describe the anatomical location, histology and physiological role of the pancreas..
5. Mention the hormones of anterior pituitary and explain their functions.
6. Discuss the functions of thyroxine.
7. Write the functions of hormones of neurohypophysis.

SHORT ANSWERS (2M)

1. Write physiological functions of vasopressin.
2. Write symptoms of Addison's disease.
3. Write outcome of hyperthyroidism.
4. What is cretinism?
5. State functions of hormones of adrenal medulla.
8. Define thyrotoxicosis and cretinism.
9. What is a pheochromocytoma and myxoedema.
10. What is goiter.
11. Functions of ADH and oxytocin*
12. Define acromegaly and gigantism.
13. Define diabetes mellitus and diabetes insipidus.
14. What is positive feedback mechanism?

CHAPTER 13. REPRODUCTIVE SYSTEM

LONG ESSAYS (10M)

1. Describe the different phases of female reproductive cycle
2. Explain the steps involved in the process of spermatogenesis and oogenesis.

SHORT ESSAYS (5M)

1. Explain spermatogenesis
2. Describe the mechanism of action of hormonal contraceptives
3. Describe the functions of ovary
4. Write a note on IUCD.
5. Write a short note on oral contraceptives
6. Write a note on menstrual cycle
7. Classify temporary methods of contraception for females.
8. Describe the structure of ovary and testes.
9. Write a note on the role of sex hormones in the regulation of menstrual cycle.
10. Write a note on female contraceptive devices.
11. Describe the internal structure and functions of testis.
12. Write a note on sex determination (genetic basis)

SHORT ANSWERS (2M)

1. Explain corpus leutium
2. Name Gonadotrophins and give their functions.
3. Write surgical methods of family planning.
4. Name few contraceptive methods.
5. Define menstrual cycle.
6. What is a vasectomy and tubectomy?
7. Name the ducts of male reproductive system in order (proximal to distal).
8. What are sex hormones?
9. Define the reproduction and list the organs of male reproductive system..
10. list the organs of male reproductive system..
11. What is parturition ?
12. Define the terms- menarche and menopause.

CHAPTER 14 SENSE ORGANS**LONG ESSAYS (10M)**

1. Write a neat, labeled diagram of eye and explain the physiology of vision
2. Write a neat, labeled diagram of ear and explain the physiology of hearing

SHORT ESSAYS (5M)

1. Draw a neat-labeled diagram of skin.
2. Describe the structure of eyeball
3. Draw a neat-labeled diagram of ear. What is the non-hearing function of ear?

4. Describe the structure of olfactory receptors.

SHORT ANSWERS (2M)

1. What are the functions of skin?
2. Functions of photoreceptors.
3. Write the non-auditory functions of ear.
4. What are olfactory receptors?
5. What are gustatory receptors?
6. What is myopia and hypermetropia?
7. What is glaucoma?
8. Mention the ear ossicles and their location.
9. Mention the papillae and taste buds.

CHAPTER 15. SKELETAL MUSCLE**SHORT ESSAYS (5M)**

1. Write about the physiology of skeletal muscle contraction.
Write a note on neuromuscular junction.
2. Describe the structure of skeletal muscle.

SHORT ANSWERS (2M)

1. Write a short note on Myasthenia gravis.
2. How do isotonic and isometric contractions differ?
3. Mention the properties of skeletal muscle
4. Draw neat labeled diagram of sarcomere
5. Mention the proteins of skeletal muscle.
6. Define the term Rigor- Mortis

CHAPTER 16. SPORTS PHYSIOLOGY**SHORT ANSWERS (2M)**

1. Enlist the drugs used by athletes.
2. Write the effect of exercises on CVS.
3. Write the effects of exercise on respiration.
4. Effects of athletic training on muscles.
5. Effects of exercise on body heat.
6. Effects of exercise on body fluid and salts.