

**1- Types of epithelium lining the respiratory system according to its region and functions.**

- a) Describe the changes in the type of epithelium throughout the respiratory system
- b) Explain how the structure of different segments of the respiratory airways reflect the functional roles that these airways play in air movement and gas exchange
- c) Distinguish the trachea, bronchi, terminal bronchioles, bronchioles, alveolar ducts, alveolar sacs, and alveoli based on key structural features
- d) Identify the different types of pneumocytes and their functions

**2- Glial cells**

- a) Types of glial cells in CNS and PNS
- b) Microscopic structure of glial cells (under LM and EM level)
- c) The role of each glial cell in nervous system

**3- Peripheral nervous system**

- a) Components of the peripheral nervous system
- b) Microscopic structure of each component
- c) The role of each component in the PNS

**4- Nephron is the functional unit of kidney, write in:**

- a) light microscopic structure of different regions of nephron
- b) electron microscopic structure of different cells in different regions of nephron
- c) structural function relation of different types of cells
- d) Juxtaglomerular Apparatus

**5- Lymph node is the organ designed to filtrate lymph. Write on, by using the following**

- a) Histological structure of different parts of lymph node
- b) How the lymph enters and leaves the lymph node?
- c) Describe the structure-function relation of L.N.

**6- Spleen is the organ designed to filtrate blood and other function. Write on using the following**

- a) Histological structure of different parts of spleen
- b) How the blood enters and leaves the spleen?
- c) Describe the structure-function relation of spleen

**7- Heart is the pump of cardiovascular system. Discuss?**

- a) Histological structure of different parts of the heart
- b) Light and electron microscopic structure of heart conducting system
- c) Significant of different types of valves

**8- Blood vessels are channels receive blood from the heart and return it to the heart. Write in that using the following**

- a) Histological structure of different types of arteries
- b) Structure and difference of veins to the corresponding artery
- c) Structure of connection between arteries and veins.

**9- Histological Study of leukocytes.**

- a) Light and electron microscopic structure of granular leukocytes
- b) Light and electron microscopic structure of nongranular leukocytes
- c) Structural function relation of all leukocytes.

**10- Erythropoiesis and thrombocytopoiesis.**

- a) Histological structure of different stages of erythropoiesis.
- b) Stages of thrombocytopoiesis