

1. (8%) Plasma membrane exerts many important functions. Please take two of them to demonstrate what properties of the plasmalemma are important to these functions.
2. (8%) Exocytosis, an important cellular function, is carried out in different forms depending on various factors. Please discuss which and how intracellular organelles are involved in this process.
3. (6%) Define cytoskeleton of the cell and discuss their similarities and differences.
4. (10%) Please list the major structural differences between muscle and epithelial tissue and explain how these structural properties relate to their functional differences.
5. (8%) There are three types of capillaries in the body. Please take one example each to discuss their structure-function relationships.
6. (10%) Which systems serve as the defense systems of the body? Please describe the cells and tissues important for these functions.
7. (10%) Regarding the histogenesis of bone, please describe the processing of endochondral ossification and the growth in length of long bone.
8. (7%) Draw and describe the various steps in fertilization of an ovum.
9. Name the following terms: (3% for each one)
 - (1) myelin sheath
 - (2) photoreceptors
 - (3) brown adipose tissue
 - (4) circumvallate papillae
 - (5) parietal (oxyntic) cells
 - (6) crypts of Lieberkuhn
 - (7) bile canaliculus
 - (8) Sertoli cells
 - (9) Organ of Corti
 - (10) tunica albuginea
 - (11) microglia