

Answer the following questions (10 points/each question):

1. Describe the structure and function of cell membranes in mammalian cells.
2. Define the primary, secondary, tertiary and quaternary structure of proteins.
3. (a) What is the Michaelis-Menten model?
(b) Why don't allosteric enzymes obey Michaelis-Menten kinetics?
4. Describe the biosynthesis of cholesterol in the human body.
5. Describe methods for the separation and characterization of proteins (enzymes) based on molecular weight or size.
6. Describe the following assays: (a) bioassay (b) receptor assay
(c) radioimmunoassay. (d) enzyme-linked immunosorbent assay.
7. Describe three general theories for the mechanism of oxidative phosphorylation.
8. Outline the structure and function of DNA in the eukaryotic chromosome.
9. Describe all the factors that cause mutation.
10. Some polysaccharides serve as a storage form of cell fuel. Describe them in detail as you know.