

1. Explain why patients give drugs to treat schizophrenia sometimes develop symptoms similar to those of Parkinson's disease (15%).
2. Describe several mechanisms by which pain could theoretically be controlled medically or surgically (20%).
3. Describe the effects of the sympathetic and parasympathetic nerves on heart rate. What is dominant at rest (15%)?
4. A person is accumulating edema throughout the body. Average capillary pressure is 25 mmHg, and lymphatic function is normal. What is the most likely cause of the edema (15%)?
5. A resting, unstressed person has increased plasma concentrations of free fatty acids, glycerol, amino acids, and ketones. What situations might be responsible (10%)? What additional plasma measurement would distinguish among them (10%)?
6. A male athlete taking large amounts of an androgenic steroid becomes sterile (unable to produce sperm capable of causing fertilization). Explain (15%).