

1. Describe in detail the sequence of events between a motor neuron action potential and skeletal-muscle fiber contraction. (15%)
2. Describe the roles that the basal ganglia and cerebellum play in motor control. (15%)
3. Draw a flow diagram illustrating the reflex compensation for hemorrhage. (20%)
4. Describe the sequence of events that cause air to move into the lungs during inspiration and out of the lungs during expiration. Diagram the changes in intrapleural pressure and alveolar pressure. (15%)
5. How does the tubular secretion of hydrogen ions occur in the kidney and how does it achieve bicarbonate reabsorption? (15%)
6. Describe the effects of estrogen and progesterone on the endometrium, myometrium, cervical mucus, vaginal epithelium, and breasts. (20%)