

1. In the concepts of spatial summation, please explain how SYNAPSE allows neurons to act as an integrator. (8%)
2. Describe all the possible components of knee jerk reflex. (8%)
3. Describe how the gravity influences effective blood volume. (10%)
4. List the possible types of stimuli that initiate most gastrointestinal reflexes. (8%)
5. Term explanation
 - 5-1. efferent neuron (4%)
 - 5-2. lateral inhibition (4%)
 - 5-3. tidal volume (V_t) (4%)
 - 5-4. enteric nervous system (4%)
6. Please describe how your endocrine system will respond when you see a hungry tiger in the jungle being ready to hunt you down! (10%)
7. Please describe how urination (urine voiding from bladder) is controlled and how you can delay the urination! (10%)
8. Please describe what mechanisms regulating sodium and water balance help maintain blood pressure homeostasis! (10%)
9. Please describe how brain-pituitary-testis axis works! (10%)
10. Please describe the hormonal mechanisms regarding the bone homeostasis: remodeling and repair! (10%)