

1. Describe the process of vomiting. (10 %) How do the kidney and respiration respond to a severe vomiting? (10 %)
2. Hypotension can be occurred by uncontrolled hemorrhage or severe loss of salt and water. Under the condition without therapeutic treatments, how do these patients restore blood pressure by the short- and long-term compensation? (20 %)
3. A patient lost the sensation and movement in his left side of body without the impairment in language. Can you suspect the damage area from his symptoms? (5 %) Describe the somatosensory and motor pathway as well as central process of language. (15 %)
4. Explain the reasons that women have a high incidence of osteoporosis after menopause. Describe bone remodeling and hormonal controls of calcium homeostasis. (20 %)
5. Which hormones stimulate lipolysis? (10 %) Describe the metabolic disorders of severe untreated insulin deficiency in type 1 diabetes mellitus (T1DM)? (10 %)