

Study Guide for Lecture Exam 4 (Emphasizing Chapters 13-17)

The test will consist of approximately 100 questions (multiple choice, short answer, matching, and 1-2 required essays) and three bonus essays. You can choose two of the three bonus essays to answer. The bonus essays will be worth 5 points each. Yes, that means you can potentially receive 110 on this test!

Understanding the following topics is suggested for the exam:

1. Spinal cord anatomy including meninges, spinal nerves, plexuses, physiology (tracts, reflexes)
2. Major parts of the brain (pons, medulla, midbrain, diencephalon, cerebral cortex)
3. Blood brain barrier, blood CSF barrier
4. CSF formation, circulation
5. Cranial nerves
6. Brain systems (limbic, hypothalamus, thalamus, basal ganglia, motor/sensory/association parts of cerebral cortex)
7. Somatic and Autonomic nervous systems
8. Anatomy of ANS, including ganglia and plexuses, sympathetic and parasympathetic divisions
9. ANS neurotransmitters and receptors (including agonist and antagonist definitions)
10. Physiology of the ANS
11. Sensory modalities-general
12. Sensory receptors including adaptation
13. Somatic sensations (tactile, thermal, pain, proprioception (including muscle spindles and tendon organs))
14. Somatic sensory pathways
15. Somatic motor pathways
16. Integration in the brain (alterness-reticular activating system, learning and memory)
17. Olfaction-anatomy and physiology
18. Gustation- anatomy and physiology
19. Vision- anatomy and physiology
20. Hearing and balance- anatomy and physiology