Chapter 27:

1. What is a blastocyst?
2. What are the 3 different germ layers that the blastocyst differentiates into? Which layer does the brain and nervous system arise from?
3. Describe neurulation. What is the neural plate? Neural tube?
4. Which end and surface of the neural tube begins to develop components of the adult brain? What are the three main components that first develop?
5. What are precursor cells?
6. What is the order of cell development in the nervous system? What is the correlation between this order and cell and cognitive function?
7. What is neural differentiation? Transcription factors? What are the key features that distinguish neural types?
8. What are oligiodendrocytes and what is their function?
9. Describe synaptogenesis. How does it work?
10. What are the two main issues when looking at synapse development?
11. How are synapse connectivity/ organization and function related?
12. What did Dennis O'Leary's experiment show?
13. Describe the densities of gray and white matter throughout development and aging.
14. What is brain plasticity?
15. Who is Donald Hebb and what did his experiments show?
16. What are critical/sensitive periods? What did Hubel and Wiesel's experiments show?
17. How are neural plasticity and recovery of neurological function after brain injury related?