Practice Questions Ch 4, part 1:

1. The supporting cells that form myelin sheath in the peripheral nervous system.
   A. Oligodendrocytes.       D. Astrocytes
   B. Satellite cells         E. Microglia
   C. Schwann cells

2. Depolarization of a cell (neuron, muscle, or glandular) is produced by
   A. inward movement of Na+       C. outward movement of Na+
   B. outward movement of K+      D. inward movement of K+

3. Repolarization of a cell (neuron, muscle, or glandular) is produced by
   A. inward movement of Na+       C. outward movement of Na+
   B. outward movement of K+      D. inward movement of K+

4. A drug that inactivates acetylcholinesterase
   A. inhibits the release of ACh from a presynaptic neuron.
   B. inhibits the attachment of ACh to its receptor.
   C. inhibits ACh breakdown and causes excessive muscle contraction.
   D. does all of these.

5. Repolarization (a.k.a. hyperpolarization) of the postsynaptic membrane in response to glycine or GABBA is produced by the opening of
   A. Na+ channels       D. Cl- channels
   B. K+ channels       E. H+ channels
   C. Ca+2 channels

6. Which of these statements about ACh receptors is false?
   A. Skeletal muscles contain nicotinic ACh receptors.
   B. The heart contains muscarinic ACh receptors.
   C. G-proteins are activated to open ion channels for nicotinic receptors.
   D. ACh receptors can be either nicotinic or muscarinic.

7. Which of these statements about adrenergic receptors is false?
   A. β1-adrenergic receptors are found in the heart.
   B. β2-adrenergic receptors are found on skeletal muscles.
   C. α-adrenergic receptors are found in smooth muscle of the GI tract.
   D. β2-adrenergic receptors are found in smooth muscle of bronchioles.

Match the description on the left with answer choices on the right for questions 8-12. It is possible for answer choices to be used more than once.

8. Will increase heart rate. A. ACh binding to muscarinic cholinergic receptors.
9. Will cause bronchodilation. B. ACh binding to nicotinic cholinergic receptors.
10. Will slow activity of GI tract smooth muscle. C. Epinephrine binding to nicotinic cholinergic receptors.
12. Will decrease heart rate. E. Epinephrine binding to α-adrenergic receptors.
       F. Epinephrine binding to β1-adrenergic receptors.
13. Which of the following neurotransmitters a monoamine produced from tryptophan?
   - A. ACh
   - B. Dopamine
   - C. GABBA
   - D. Glycine
   - E. Serotonin
   - F. Epinephrine

14. Exposure to which of the following produces hypertonia?
   - A. Botulism toxin
   - B. Tetanus toxin
   - C. Saxitoxin
   - D. Tetrodotoxin
   - E. Sarin gas
   - F. Organophosphate insecticides
   - G. answers A, C, and D
   - H. answers B, E and F.

15. Which of the following is a disorder involving autoimmune destruction of ACh receptors on muscles?
   - A. Alzheimer’s disease
   - B. Amyotrophic lateral sclerosis
   - C. Multiple sclerosis
   - D. Huntington’s disease
   - E. Myasthenia gravis
   - F. Parkinson’s disease
   - G. Cystic fibrosis
Ch 4. Answers:
1. C
2. A
3. B
4. C
5. D
6. C
7. B
8. F
9. D
10. E
11. A
12. A
13. E
14. H
15. E

How did you do?