(With the exception of the last question, each question is worth 1 pt. Write your answers for the last questions directly on the quiz, and hand it in along with your scantron. Be sure to put your name on both the scantron and your quiz!)

1. ________ refers to the process by which drugs are absorbed, distributed within the body, metabolized, and then excreted from the body.
   a. Neuropharmacology
   b. **Pharmacokinetics**
   c. Drug Metabolism
   d. Psychoimmunology
   e. Pharmacodynamics

2. The fastest way for a drug to reach a site of action in the brain is via the ______ administration route.
   a. Oral
   b. Topical
   c. **Intravenous**
   d. Intramuscular
   e. Intraperitoneal

3. Administration of a drug that binds with a postsynaptic receptor, but does not open ion channels would be termed a(n)
   a. Direct agonist
   b. Ligand
   c. Direct synergist
   d. **Direct antagonist**
   e. Indirect pheromone

4. A drug that blocks a presynaptic autoreceptor
   a. Reduces the release of the neurotransmitter from the axon terminal
   b. Alters the reuptake of the neurotransmitter into the axon terminal
   c. Blocks the opening of ion channels in the postsynaptic membrane
   d. **Increases the release of the neurotransmitter from the axon terminal**
   e. Acts as an antagonist for this synapse

5. Drugs that block or inhibit postsynaptic receptor effects are called
   a. Agonists
   b. Ligands
   c. Synergists
   d. **Antagonists**
   e. Pheromones

6. The half-life of a substance is the time it takes for ½ of the substance to be eliminated by the body. Which of the following substances does not have a half-life at all, and instead is metabolized at a steady rate by the body?
   a. Cocaine
   b. **Alcohol**
   c. Marijuana
   d. Morphine
   e. Heroin
7. The ____________ is a measure of the safety of a drug.
   a. Lethality score
   b. Dose-response curve
   c. **Therapeutic index**
   d. Pharmacokinetic profile
   e. Psychodynamic profile

8. The rate at which a drug reaches active sites in the brain is determined mostly by its degree of
   a. water solubility
   b. **lipid solubility**
   c. metabolism via the liver
   d. depot binding in blood, bone, and fat
   e. All of the above are correct.

9. Repeated administration of a constant drug dose typically produces ______, which is defined as a(n) _____effect of
   the drug.
   a. Dynamic capacity; increased
   b. Sensitization; reduced
   c. Behavioral inactivation; increased
   d. **Tolerance; reduced**
   e. Homeostasis; constant

10. Which of the following is a compensatory mechanism that the system engages in that would result in drug
    tolerance?
        a. A decreased metabolism of the drug
        b. An increase in the number of receptors sensitive to that drug
        c. **A reduction in the number of receptors sensitive to that drug**
        d. An increase in the receptors’ affinity for that drug
        e. A reduction in sensitivity to placebos

11. ______ is a toxin known to ______ the release of Acetylcholine, resulting in paralysis.
    a. Botulism (botulinum toxin); inhibit
    b. Muscarine transferase; increase
    c. Black widow spider venom; inhibit
    d. Nicotine synthase; increase
    e. None of the above

12. Which of the following drugs has an abundance of receptors in the midbrain, but very few in the cerebral cortex?
    a. Nicotine
    b. Marijuana
    c. **Opium**
    d. Alcohol
    e. Muscarine

13. Which of the following is true of dopamine receptors?
    a. **They are metabotropic**
    b. They are ionotropic
    c. D1 receptors are located on the presynaptic membrane
    d. D2 receptors are only found on the postsynaptic membrane
    e. They are located only in the cerebellum
14. A drug such as amphetamine, which causes the transporters for dopamine to run in reverse, would
   a. Increase the synthesis of dopamine
   b. Block the reuptake of dopamine
   c. Antagonize the postsynaptic receptors for dopamine
   d. Spill dopamine into the synaptic cleft
   e. Both B and D are correct

15. The term “opioids” refers to ______, while the term “opiates” refers to ______.
   a. Endogenous chemicals; exogenous drugs
   b. Exogenous drugs; endogenous chemicals
   c. Postsynaptic receptors, endogenous
   d. Postsynaptic receptors; presynaptic receptors
   e. They are different names for the same thing

16. Imagine you have invented two new drugs that have analgesic effects (i.e. they reduce pain) but also can
    depress heart rate. One of these new drugs has a large margin of safety, and the other has a very small margin
    of safety. For each of your new drugs, draw a set of two dose-response curves: one for the analgesic effects and
    one for the depressive effects. Indicate which of the two drugs is safer.