Recreational Drugs and Neurotransmitters Quiz
SP.236, 4.13.2009

I. Name at least one example from each drug class:

1. Benzodiazepine
2. Barbiturate
3. A different kind of sedative
4. Stimulant
5. A different kind of stimulant
6. Opioid
7. Psychedelic
8. A different kind of psychedelic
9. Dissociative anesthetic (NMDA antagonist)
10. Deliriant (muscarinic ACh antagonist)
11. Inhalant
12. A different kind of inhalant
13. A drug I called “other”

II. Name a drug that causes:

1. Insomnia
2. Reduced appetite
3. Drowsiness
4. Heart attack
5. Brain damage
6. Psychosis
7. Psychosis (via a different mechanism)
8. Psychosis (via yet another mechanism)
9. Withdrawal
10. Addiction
11. Vasoconstriction
12. Vasodilation
13. Reduced anxiety
14. Dilated/Constricted pupils (circle one)

III. Match the drug or class of drugs with its mechanism of action:

<table>
<thead>
<tr>
<th>Drug/Class of Drugs</th>
<th>Mechanism of Action</th>
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<tbody>
<tr>
<td>1. Salvia (salvinorin A)</td>
<td>A Opens BK potassium channels, closes SK channels in the reward pathway of the brain, GABA$_A$ agonist, many other effects</td>
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<td>2. Caffeine</td>
<td>B Nonselective full agonist of opioid receptors, especially $\mu$ subtype receptor</td>
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<td>3. Nicotine</td>
<td>C 5-HT$<em>{2A}$ and 5-HT$</em>{2C}$ partial agonist, plus other effects on receptors and transporters (mostly for DA, NE, and other 5-HT receptors)</td>
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<td>4. PCP, ketamine, dextromethorphan</td>
<td>D NMDA (glutamate receptor) antagonist</td>
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<td>5. Cocaine</td>
<td>E Agonist at a special binding site on the GABA$_A$ receptor</td>
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<td>6. Psychedelics (LSD, psilocybin)</td>
<td>F Nicotinic acetylcholine receptor agonist</td>
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<td>7. Heroin</td>
<td>G Muscarinic acetylcholine receptor antagonist</td>
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<td>8. Alcohol</td>
<td>H DA, NE, and 5-HT reuptake inhibitor (Extra credit: what is the other, non-psychotropic mechanism?)</td>
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<tr>
<td>9. Benzodiazepines</td>
<td>I Selective $\kappa$-opioid agonist</td>
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<tr>
<td>10. Atropa belladonna, atropine, scopolamine, Benadryl, jimson weed</td>
<td>J Adenosine antagonist, PDE inhibitor.</td>
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