**Part 1: Matching and open ended**

1. Alkaloids
2. Amine salts
3. Quinine
4. Free base
5. Pumiliotoxins
6. The name of an uncharged amine
7. These are amines derived from plants, animals, and fungi
8. Decongestants and antihistamines are found as these
9. Found in frog skin and arthropod extracts
10. The first antimalaria drug/ used to fight fatigue and cold
11. Give two properties of alkaloids.
12. Describe heterocyclic amines.
13. What is the difference between an amine and an amide?

**Part 2: Naming and Classification of Amides.** A) classify as 1o, 2o, or 3o  & B) name the following amides

1. 
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. 

10.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. CH3CH2CH2(CO)NHCH2CH2CH3

**Part 3: Reactions- Amidation**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 🡪 amide + H2O

1. From amidation:
* primary amine 🡪
* Secondary amine🡪
* Tertiary amine🡪
* Ammonia🡪
1. Write the reaction for the formation of N-ethyl pentanamide. Draw and name reactants!
2. 2-methylbutanoic acid + N,N-dimethylamine 🡪

PRACTICE MULTIPLE CHOICE

1. When propanoic acid reacts with methyl amine, the reaction called amidation yields \_\_\_\_\_
	1. 2-methyl propanamide
	2. N-methyl propyl amide
	3. N-propyl methanamide
	4. N-methyl propanamide
2. What is the name for this compound? CH3CH2CH2NHCH3  \_\_\_\_\_
	1. Propyl methanamine
	2. N-propyl methanamine
	3. N-methyl propanamine
	4. 2-Butanamine
3. Which of the following is NOT an alkaloid? \_\_\_\_\_
	1. Serotonin
	2. Ethanamine
	3. Caffeine
	4. Quinine
4. Which of the following cannot form an amide? \_\_\_\_\_
	1. NH3
	2. CH3(CO)OH
	3. (CH3)2NH2
	4. (CH3)3N