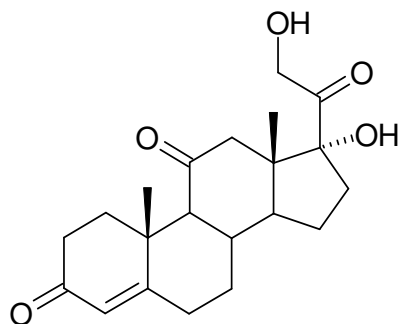


Name: \_\_\_\_\_

**SCH 4U Organic Test - Part 1**

1. State the degrees unsaturation and the chemical formula for cortisone (hormone produced by the adrenal gland in response to physical or emotional stress - nature corticosteroid)



degree unsaturation

chemical formula:

**AutoNom Name:**


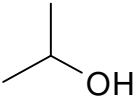
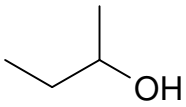
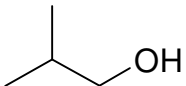
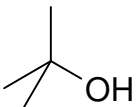
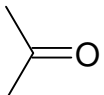
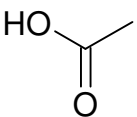
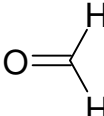

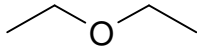
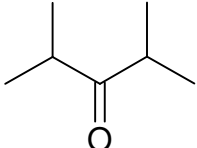
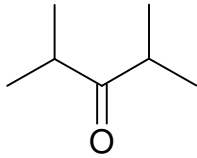
(10R,13S,17R)-17-Hydroxy-17-(2-hydroxy-acetyl)-10,13-dimethyl-1,6,7,8,9,10,12,13,14,15,16,17-dodecahydro-2H-cyclopenta[a]phenanthrene-3,11-dione

2.  $H = [2C + 2] - 2(\text{deg. unsat}) - X + N$

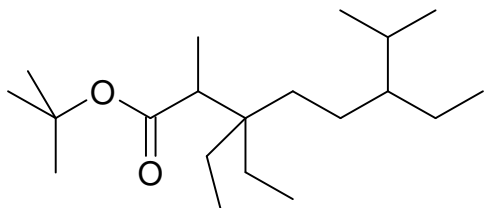
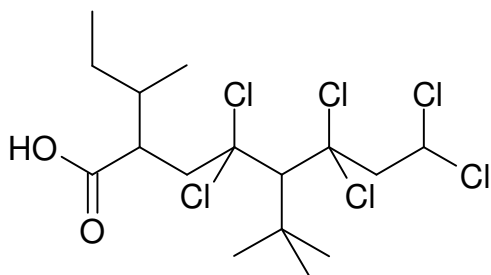
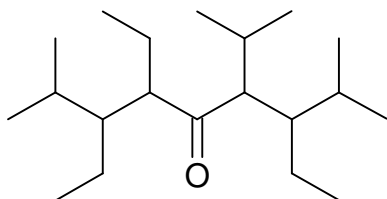
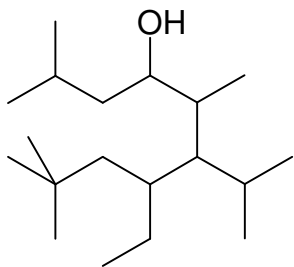
Use the above saturation formula to determine the degree of unsaturation and hence the possible combinations of functional groups (and rings) that would make possible each formula. (1/2 mark per correct response, some marks may be deduced for extra incorrect answers)

|                   |                |
|-------------------|----------------|
| $C_4H_{10}O_2$    | $C_{12}H_{24}$ |
| $C_{15}H_{30}O_2$ |                |

3. Provide common names and I.U.P.A.C. names for each of the following. If more than one common name exists, include both. Be sure to follow the rules when writing I.U.P.A.C. names. One mark per name

|   | Common Names | I.U.P.A.C.   |
|---|--------------|--|
|    |              |  |
|    |              |  |
|    |              |  |
|    |              |  |
|   |              |  |
|  |              |  |
|  |              |  |
|  |              |  |
|  |              |  |
|  |              |  |
|  |              |  |

4. Provide full and correct I.U.P.A.C. names:



continued on next page

