

Name: _____

Chem 10, Section: _____

Prelab Assignment: The Properties of Oxygen Gas

1. Oxygen gas will produced via a decomposition reaction of a certain substance.
 - a. Name the substance that will be decomposed. _____
 - b. Name the two products generated by this reaction. _____

2. A catalyst called manganese(IV) oxide, MnO_2 , will be used to facilitate the production of oxygen gas. Exactly what does the catalyst do?

3. Carefully read the procedure for producing oxygen gas (Part A) and examine the accompanying figure of the equipment set-up.
 - a. What type of flask does the decomposition reaction occur in? _____
 - b. What chemical is added to this flask through the thistle tube? _____
 - c. What chemical(s) are already in the flask? _____
 - d. What type of bottles is the oxygen gas collected in? _____
 - e. After the oxygen is collected, do you store it in these bottles right-side up or upside down? (circle one) Explain why.

4. After generating and collecting the oxygen, you will then investigate its role in combustion reactions
 - a. Is oxygen a reactant or product in a combustion reaction? _____
 - b. Are combustion reactions exothermic or endothermic? _____

5. In Part B you will burn a variety of substances in the oxygen gas collected from Part A.
 - a. Which *one* of these substances must be burned in the hood? _____
 - b. Which *two* of these substances must be burned in air only? _____
 - c. Which substance (one only) will be burned by the instructor? _____