

2008 AP[®] CHEMISTRY FREE-RESPONSE QUESTIONS

- (b) Hydrogen chloride gas is oxidized by oxygen gas.

(i) Balanced equation:

- (ii) If three moles of hydrogen chloride gas and three moles of oxygen gas react as completely as possible, which reactant, if any, is present in excess? Justify your answer.

- (c) Solid potassium oxide is added to water.

(i) Balanced equation:

- (ii) If a few drops of phenolphthalein are added to the resulting solution, what would be observed? Explain.

YOU MAY USE THE SPACE BELOW FOR SCRATCH WORK, BUT ONLY EQUATIONS THAT ARE WRITTEN IN THE ANSWER BOXES PROVIDED WILL BE GRADED.