

2009 AP[®] CHEMISTRY FREE-RESPONSE QUESTIONS

- (b) Equal volumes of equimolar solutions of ammonia and hydrochloric acid are combined.

(i) Balanced equation:

(ii) Indicate whether the resulting solution is acidic, basic, or neutral. Explain.

- (c) Solid mercury(II) oxide decomposes as it is heated in an open test tube in a fume hood.

(i) Balanced equation:

(ii) After the reaction is complete, is the mass of the material in the test tube greater than, less than, or equal to the mass of the original sample? Explain.

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