CHEMISTRY

Part B

Time—50 minutes

NO CALCULATORS MAY BE USED FOR PART B.

Answer Question 4 below. The Section II score weighting for this question is 15 percent.

4. Write the formulas to show the reactants and the products for any FIVE of the laboratory situations described below. Answers to more than five choices will not be graded. In all cases, a reaction occurs. Assume that solutions are aqueous unless otherwise indicated. Represent substances in solution as ions if the substances are extensively ionized. Omit formulas for any ions or molecules that are unchanged by the reaction. You need not balance the equations.

   Example: A strip of magnesium is added to a solution of silver nitrate.

Ex.	$Mg + Ag^{+} \rightarrow Mg^{2+} + Ag$

   (a) Solid calcium carbonate is strongly heated.

   (b) A strip of magnesium metal is placed in a solution of iron(II) chloride.

   (c) Boron trifluoride gas is mixed with ammonia gas.

   (d) Excess concentrated hydrochloric acid is added to a solution of nickel(II) nitrate.

   (e) Solid ammonium chloride is added to a solution of potassium hydroxide.

   (f) Propanal is burned in air.

   (g) A strip of aluminum foil is placed in liquid bromine.

   (h) Solid copper(II) sulfide is strongly heated in air.