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. No more than five choices will 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 potassium chlorate is strongly heated.

   (b) Solid silver chloride is added to a solution of concentrated hydrochloric acid.

   (c) A solution of ethanoic (acetic) acid is added to a solution of barium hydroxide.

   (d) Ammonia gas is bubbled into a solution of hydrofluoric acid.

   (e) Zinc metal is placed in a solution of copper(II) sulfate.

   (f) Hydrogen phosphide (phosphine) gas is added to boron trichloride gas.

   (g) A solution of nickel(II) bromide is added to a solution of potassium hydroxide.

   (h) Hexane is combusted in air.