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) A solution of sodium iodide is added to a solution of lead(II) acetate.

   (b) Pure solid phosphorus (white form) is burned in air.

   (c) Solid cesium oxide is added to water.

   (d) Excess concentrated hydrochloric acid is added to a 1.0 *M* solution of cobalt(II) chloride.

   (e) Solid sodium hydrogen carbonate (sodium bicarbonate) is strongly heated.

   (f) An excess of hydrochloric acid is added to solid zinc sulfide.

   (g) Acidified solutions of potassium permanganate and iron(II) nitrate are mixed together.

   (h) A solution of potassium hydroxide is added to solid ammonium chloride.