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 copper(II) sulfate is spilled onto a sheet of freshly polished aluminum metal.

   (b) Dimethyl ether is burned in air.

   (c) A 0.1 *M* nitrous acid solution is added to the same volume of a 0.1 *M* sodium hydroxide solution.

   (d) Hydrogen iodide gas is bubbled into a solution of lithium carbonate.

   (e) An acidic solution of potassium dichromate is added to a solution of iron(II) nitrate.

   (f) Excess concentrated aqueous ammonia is added to a solution of nickel(II) bromide.

   (g) A solution of sodium phosphate is added to a solution of aluminum nitrate.

   (h) Concentrated hydrochloric acid is added to a solution of sodium sulfide.