

2002 AP[®] CHEMISTRY FREE-RESPONSE QUESTIONS (Form B)

CHEMISTRY

Part B

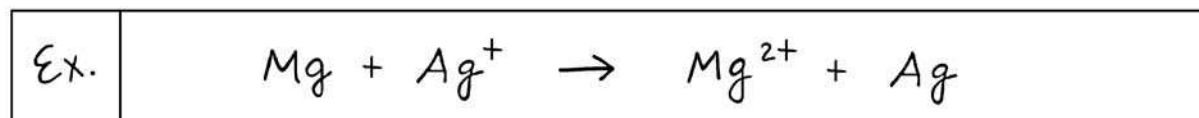
Time—50 minutes

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.



- (a) A sample of 1-propanol is burned in air.
- (b) Solutions of sodium chromate and lead nitrate are mixed.
- (c) A bar of iron metal is added to a solution of iron(III) chloride.
- (d) Concentrated ammonia solution is added to copper(II) sulfate solution.
- (e) Sulfur dioxide gas is bubbled into a beaker of water.
- (f) Equal volumes of 0.1 *M* sodium phosphate and 0.1 *M* hydrochloric acid are mixed.
- (g) Hydrogen chloride gas is bubbled through a solution of potassium cyanide.
- (h) Liquid bromine is carefully added to a solution of potassium iodide.