

2003 AP[®] CHEMISTRY FREE-RESPONSE QUESTIONS (Form B)

CHEMISTRY

Part B

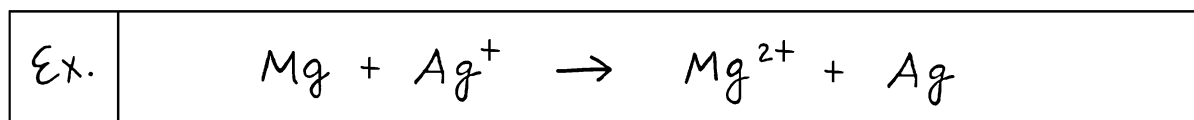
Time—50 minutes

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) Hot hydrogen gas is passed over heated copper(II) oxide solid.
- (b) Solid sodium hydride is added to water.
- (c) Propanone is burned in air.
- (d) A solution of lead(II) nitrate is added to a solution of potassium sulfate.
- (e) Ammonia gas is mixed with hydrogen chloride gas.
- (f) Sulfur trioxide gas is bubbled into water.
- (g) Excess concentrated potassium hydroxide solution is added to a solution of nickel(II) chloride.
- (h) Solid sodium acetate is added to 1.0 *M* hydrobromic acid.