MULTIPLE CHOICE

Section 3.6 Reactions with Limiting Amounts of Reactants

- 1. Which statement below is false when 10 g of nitrogen reacts with 5.0 g of hydrogen to produce ammonia?
  - $N_2(g) + 3 H_2(g) \longrightarrow 2 NH_2(g)$
  - a) 2.8 grams of hydrogen are left over.
  - b) Hydrogen is the excess reactant.
  - c) Nitrogen is the limiting reactant.
  - d) The theoretical yield of ammonia is 15 g.
- 2. How many grams of the excess reagent are left over when 6.00 g of CS<sub>2</sub> gas react with 10.0 g of Cl<sub>2</sub> gas in the following reaction:

```
CS_2(g) + 3 Cl_2(g) \longrightarrow CCl_4(l) + S_2Cl_2(l)
```

- a) 2.42 g b) 2.77 g
- c) 3.58 g
- d) 4.00 g

Section 3.7 Concentrations of Reactants in Solution: Molarity

- 3. What is the concentration when 10.0 g of FeCl<sub>3</sub> is dissolved in enough water to make 275 mL of solution? a) 2.24 x 10 M b) 0.224 M
  - c) 4.46 M
  - d) 4.46 x 10 M

Section 3.8 Diluting Concentrated Solutions

4. What is the concentration of the final solution when 65 mL of a 12 M HCl solution is diluted to 0.15 L? a) 2.8 x 10 M b) 5.2 M c) 28 M

d) 5.2 x 10 M

Section 3.9 Solution Stoichiometry

5. How many milliliters of 0.260 M Na $_2$ S are needed to react with 25.00 mL of 0.315 M AgNO ?  $Na_2S(aq) + 2 AgNO_2(aq) \longrightarrow 2 NaNO_2(aq) + Ag_2S(s)$ 

a) 15.1 mL b) 30.2 mL c) 33.0 mL d) 60.0 mL 6. How many milliliters of 0.550 M hydroiodic acid are needed to react with 25.00 mL of 0.217 M CsOH?

 $HI(aq) + CsOH(aq) - \longrightarrow CsI(aq) + H_2O(1)$ 

- a) 0.209 mL
- b) 4.77 mL
- c) 9.86 mL
- d) 101 mL

Chapter 3B Practice Test

1.	d)				
2	a)	Chapter:	3	QUESTI ON:	40
~.		Chapter:	3	QUESTI ON:	44
3.	b)	Chapter:	3	QUESTI ON:	49
4.	b)	Chanter	3	QUESTI ON:	56
5.	a)	onupeer	U	QUEDITON.	00
6.	c)	Chapter:	3	QUESTI ON:	61
		Chapter:	3	QUESTI ON:	66