

Answers to Multiple-Choice Questions

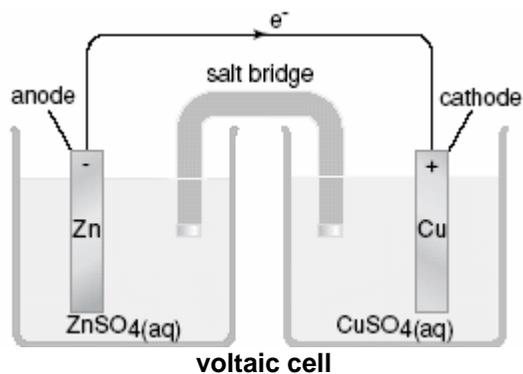
1. d
2. a
3. d
4. d
5. b
6. c
7. c
8. b
9. a
10. a
11. c
12. a
13. c
14. b
15. a

Answers to Numerical Response Questions

16.	0.53 V
17.	61.2 min.
18.	2.67 L
19.	322 min
20.	7.00 min
21.	0.22 g
22.	69.5 g/mol
23.	+2
24.	-1.26 V

Answers to Written Response Questions

25. a) Functioning cell



ANSWER KEY	Chapter 13 Test Answer Key	BLM 13.5.1A
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$$b) \quad 50 \text{ mL} \times \frac{\cancel{\text{L}}}{1000 \text{ mL}} \times 1.0 \frac{\cancel{\text{mol}}}{\cancel{\text{L}}} \times 63.55 \frac{\text{g}}{\cancel{\text{mol}}} \text{Cu} = 3.18 \text{ g increase for Cu}$$

$$50 \text{ mL} \times \frac{\cancel{\text{L}}}{1000 \text{ mL}} \times 1.0 \frac{\cancel{\text{mol}}}{\cancel{\text{L}}} \times 65.39 \frac{\text{g}}{\cancel{\text{mol}}} \text{Zn} = 3.27 \text{ g increase for Zn}$$

26. a) The anode in an electroplating process is normally a high purity form of the metal to be plated. There are very few such nickel products. An inert electrode, such as platinum can be use with an aqueous solution of a nickel salt as the electrolyte.

b)

$$\frac{5.00 \cancel{\text{g Ni}}}{58.69 \frac{\cancel{\text{g}}}{\text{mol Ni}}} \times \frac{2 \cancel{\text{mol e}^-}}{\cancel{\text{mol Ni}}} \times \frac{9.65 \times 10^4 \text{ C}}{\cancel{\text{mol e}^-}} \times \frac{1}{10 \cancel{\text{min}} \times 60 \frac{\cancel{\text{s}}}{\cancel{\text{min}}}} = 27.4 \frac{\text{C}}{\text{s}} = 27.4 \text{ A}$$