45) [2] how much solute is dissolved

46) [3] $\frac{161\ \text{mg}}{1\ \text{dL}} \left| \frac{1\ \text{g}}{1000\ \text{mg}} \right| \frac{10\ \text{dL}}{1\ \text{L}} = \frac{1.61\ \text{g}}{\text{L}}$

48) [3]

$$\frac{78\ \text{mg}}{1\ \text{dL}} \left| \frac{1000\ \mu\text{g}}{1\ \text{mg}} \right| \frac{1\ \text{dL}}{100\ \text{mL}} = \frac{780\ \mu\text{g}}{\text{mL}}$$

50) [3] 1 L of 3.3 % dextrose (m/v)

$$\frac{1\ \text{L}}{1\ \text{L}} \left| \frac{1000\ \text{mL}}{1\ \text{L}} \right| \frac{3.3\ \text{g}}{100\ \text{mL}} = 33\ \text{g}$$

51) [3] $500\ \text{mL} \times \frac{.3\ \text{g NaCl}}{100\ \text{mL}} = 1.5\ \text{g}$

53) 2 $\frac{12\ \text{mmol}}{\text{L}} \times \frac{1\ \text{mol}}{1000\ \text{mmol}} = 0.012\ M$

56) 3 $M = \frac{\text{mol}}{\text{L}}$ $\text{mol} = M \cdot \text{L} = \left(\frac{.45\ \text{mol}}{\text{L}}\right)(.52\ \text{L}) = .23\ \text{mol}\ Ca^{2+}$

1 Ca^{2+} for 1 $CaCl_2$

57) 6 $9.65 \times 10^{25}\ K^+ \times \frac{1\ \text{mol}\ K^+}{6.02 \times 10^{23}} = \_\_\_\_\_\ \text{mol}\ K^+ \times \frac{1\ \text{mol}\ K_2CO_3}{2\ \text{mol}\ K^+} = \_\_\_\_\_\ \text{mol}\ K_2CO_3$

$\_\_\_\_\_\ \text{mol}\ K_2CO_3 \times \frac{1000\ \text{mmol}}{1\ \text{mol}} \times \frac{1}{3\ \text{L}} = \underline{2.67 \times 10^4}\ \text{mM}\ K_2CO_3$

58) 3 $\frac{.9\ \text{mmol}}{\text{L}} \times \frac{2\ \text{eq}}{1\ \text{mmol}} = \frac{1.8\ \text{meq}}{\text{L}}$

Mg^{2+}

59) 3 $\frac{4.0\ \text{mmol}}{\text{L}} \Big| \frac{1\ \text{meq}}{1\ \text{mmol}} = \frac{4.0\ \text{meq}}{\text{L}}$ K (+1)

62) 3 $\frac{50\ \text{mg}}{3\ \text{hr}} \Big| \frac{5\ \text{mL}}{25\ \text{mg}} = \frac{10\ \text{mL}}{3\ \text{hr}}$

63) 3 $\frac{300{,}000\ \text{units}}{} \Big| \frac{5\ \text{mL}}{200{,}000\ \text{units}} = 7.5$ or $8\ \text{mL}$

both = 125 mg

64) 3 $15\ \text{g} \times \frac{15\ \text{mL}}{10\ \text{g}} = 22.5\ \text{mL}$

65) 3 $\frac{250\ \text{mg}}{6\ \text{hrs}} \Big| \frac{2\ \text{mL}}{125\ \text{mg}} \Big| \frac{1\ \text{hr}}{60\ \text{min}} = \frac{.01\ \text{mL}}{\text{min}}$

67) 3

$$\frac{60\ \text{mL}}{\text{hr}} \left| \frac{50\ \text{mg}}{250\ \text{mL}} \right. = \frac{12\ \text{mg}}{\text{hr}}$$

71) 3

$$\frac{3.3\ \text{g}}{100\ \text{mL}} \left| \frac{1\ \text{mol}}{180\ \text{g}} \right| \frac{1000\ \text{mL}}{1\ \text{L}} = \frac{.18\ \text{mol}}{\text{L}}$$

73) 6

$$\frac{.6\ \text{mg}}{\text{dL}} \left| \frac{1\ \text{g}}{1000\ \text{mg}} \right| \frac{1\ \text{mol}}{163.9\ \text{g}} \left| \frac{3\ \text{mol}\ Na^{+}}{1\ \text{mol}} \right| \frac{10\ \text{dL}}{1\ \text{L}} = \frac{1 \times 10^{-4}\ \text{mol}}{\text{L}}$$

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