Chemistry 141 Name

Dr. Cary Willard

Quiz 11A (20 points) May 12, 2008

All work must be shown to receive credit.

$$∆T\_{f}=K\_{f}m, ∆T\_{b}=K\_{b}m, π=MRT, R=\frac{0.0821 L atm}{mol K}=\frac{62.4 L torr}{mol K}, $$

1. (8 points) A 3.65 M solution of glucose (C6H12O6) has a density of 1.26 g/ml, calculate the percent glucose in the solution and the molality of the solution.
2. (4 points) A person preparing a fish tank uses preboiled (and then cooled) water to fill it. When the fish is put into the tank, it dies. Explain.
3. (4 points) A beaker contains 100.0 mL of pure water. A second beaker contains 100.0 mL of seawater. The two beakers are left side by side on a lab bench for one week. At the end of the week the liquid level in both beakers has decreased. However, the level has decreased more in one of the beakers than in the other. Which one and why?
4. (4 points) Calculate the freezing point of the solution in question 1. The Kf for water is 1.86 oC/m.

Chemistry 141 Name

Dr. Cary Willard

Quiz 11B (20 points) May 12, 2008

All work must be shown to receive credit.

$$∆T\_{f}=K\_{f}m, ∆T\_{b}=K\_{b}m, π=MRT, R=\frac{0.0821 L atm}{mol K}=\frac{62.4 L torr}{mol K}, $$

1. (8 points) A 4.28 M solution of glucose (C6H12O6) has a density of 1.31 g/ml, calculate the percent glucose in the solution and the molality of the solution.
2. (4 points) A person preparing a fish tank uses preboiled (and then cooled) water to fill it. When the fish is put into the tank, it dies. Explain.
3. (4 points) A beaker contains 100.0 mL of pure water. A second beaker contains 100.0 mL of seawater. The two beakers are left side by side on a lab bench for one week. At the end of the week the liquid level in both beakers has decreased. However, the level has decreased more in one of the beakers than in the other. Which one and why?
4. (4 points) Calculate the freezing point of the solution in question 1. The Kf for water is 1.86 oC/m.

Chemistry 141 Name

Dr. Cary Willard

Quiz 11C (20 points) May 12, 2008

All work must be shown to receive credit.

$$∆T\_{f}=K\_{f}m, ∆T\_{b}=K\_{b}m, π=MRT, R=\frac{0.0821 L atm}{mol K}=\frac{62.4 L torr}{mol K}, $$

1. (8 points) A 4.28 M solution of glucose (C6H12O6) has a density of 1.31 g/ml, calculate the percent glucose in the solution and the molality of the solution.
2. (4 points) A person preparing a fish tank uses preboiled (and then cooled) water to fill it. When the fish is put into the tank, it dies. Explain.
3. (4 points) A beaker contains 100.0 mL of pure water. A second beaker contains 100.0 mL of seawater. The two beakers are left side by side on a lab bench for one week. At the end of the week the liquid level in both beakers has decreased. However, the level has decreased more in one of the beakers than in the other. Which one and why?
4. (3 points) Calculate the freezing point of the solution in question 1. The Kf for water is 1.86 oC/m.