**Quiz 8 Solutions**

1. **Hydrogen bonds between water molecules**



Your answer:
cause surface tension on the water surface
allows water to dissolve ionic and polar compounds
are attractions between a partially negative oxygen atom and a partially positive hydrogen atom
all of the above


1. **A solution is made of 85.0 g of water and 5.0 g of NaCl.**



Your answer:
The solute is water and the solvent is NaCl.
The solute is NaCl and the solvent is the solution.
The solute is NaCl and the solvent is water.
Both NaCl and water are solutes.


1. **A strong electrolyte is a solute that**



Your answer:
dissolves in water as molecules only
dissolves in water as ions only
dissolves in water as molecules and ions
does not dissolve in water


1. **The number of equivalents in 1.0 mole of Fe3+ is**



Your answer:
0 equivalents
1 equivalents
3 equivalents
2 equivalents


1. **At 40oC,KI has a solubility of 160 g KI per 100 g of water. How many grams of KI are needed to prepare a saturated solution using 25g of water?**



Your answer:
160 g KI
80 g KI
40 g KI
20 g KI


1. **A solution contains 15 g sucrose (table sugar) and 60 g of water. What is the mass/mass % of the sucrose solution?**



Your answer:
80% (m/m) sucrose solution
15 % (m/m) sucrose solution
25% (m/m sucrose solution
20 % (m/m) sucrose solution


1. **How many grams of NaOH are needed to prepare 400. mL of a 15%(m/v) NaOH solution?**



Your answer:
15 g NaOH
27 g NaOH
38 g NaOH
60. g NaOH


1. **How many mL of a 5.0% glucose solution provide 80.0 g of glucose?**



Your answer:
400 mL of 5.0% glucose solution
1200 mL of 5.0% glucose solution
100 mL of 5.0% glucose solution
1600 mL of 5.0% glucose solution


1. **What type of mixture contains solute particles that are retained by a semipermeable membrane, but do not settle out upon standing?**



Your answer:
mixture
colloidal
suspension
solution


1. **A semipermeable membrane separates a 2% starch solution and an 8% starch solution.**



Your answer:
Initially water will flow from the 2% starch solution to the 8% solution.
The water level of the 8% solution will rise.
The 8% starch solution will be diluted.
All of the above.


1. **Red blood cells placed in a 5% NaCl solution will**



Your answer:
not change in volume.
hemolyze.
dialyze.
crenate.


1. **A 20.0 g sample of NaOH is used to make a 250 mL NaOH solution. What is the molarity of the NaOH solution?**



Your answer:
8.0 M
5.0 M
2.0 M
1.0 M


1. **How many grams of NaCl are needed to prepare 0.500 L of a 4.00 M NaCl solution?**



Your answer:
58.5 g NaCl
117 g NaCl
2.00 g NaCl
4.00 g NaCl


1. **How many mL of 5.00 M HCl solution is needed to provide 1.5 mole of HCl?**



Your answer:
333 mL
1500 mL
300 mL
750 mL


1. **Express the concentration of a 2.0 M NaOH solution as a mass/volume percent(%).**



Your answer:
4.0 % (m/v) NaOH solution
2.0 % (m/v) NaOH solution
8.0 % (m/v) NaOH solution
40% (m/v) NaOH solution


**Quiz 8 Solutions Answers**1) Hydrogen bonds between water molecules

Correct Answer: all of the above

2) A solution is made of 85.0 g of water and 5.0 g of NaCl.

Correct Answer: The solute is NaCl and the solvent is water.

3) A strong electrolyte is a solute that

Correct Answer: dissolves in water as ions only

4) The number of equivalents in 1.0 mole of Fe3+ is

Correct Answer: 3 equivalents

5) At 40oC,KI has a solubility of 160 g KI per 100 g of water. How many grams of KI are needed to prepare a saturated solution using 25g of water?

Correct Answer: 40 g KI

6) A solution contains 15 g sucrose (table sugar) and 60 g of water. What is the mass/mass % of the sucrose solution?

Correct Answer: 20 % (m/m) sucrose solution

7) How many grams of NaOH are needed to prepare 400. mL of a 15%(m/v) NaOH solution?

Correct Answer: 60. g NaOH

8) How many mL of a 5.0% glucose solution provide 80.0 g of glucose?

Correct Answer: 1600 mL of 5.0% glucose solution

9) What type of mixture contains solute particles that are retained by a semipermeable membrane, but do not settle out upon standing?

Correct Answer: colloidal

10) A semipermeable membrane separates a 2% starch solution and an 8% starch solution.

Correct Answer: All of the above.

11) Red blood cells placed in a 5% NaCl solution will

Correct Answer: crenate.

12) A 20.0 g sample of NaOH is used to make a 250 mL NaOH solution. What is the molarity of the NaOH solution?

Correct Answer: 2.0 M

13) How many grams of NaCl are needed to prepare 0.500 L of a 4.00 M NaCl solution?

Correct Answer: 117 g NaCl

14) How many mL of 5.00 M HCl solution is needed to provide 1.5 mole of HCl?

Correct Answer: 300 mL

15) Express the concentration of a 2.0 M NaOH solution as a mass/volume percent(%).

Correct Answer: 8.0 % (m/v) NaOH solution