

PSC- 4012 Quiz #4

Name:

Date:

1. Indicate whether each of the following is an acid, base or salt. Explain your answer referring to the substance's dissociation in water.

a) HNO_3 b) $\text{Al}(\text{OH})_3$ c) CaSO_4 d) NaOH e) CH_3COOH

2. You obtained the following lab results from tests using litmus paper and an electric conductivity detector:

Test	A	B	C	D	E
Conducts current	+++	+++	no	+	+++
Red litmus paper	blue	red	red	red	red
Blue litmus paper	blue	red	blue	red	blue

Which solution/s is/are:

a) acidic and weak electrolyte ____

b) acidic and strong electrolyte ____

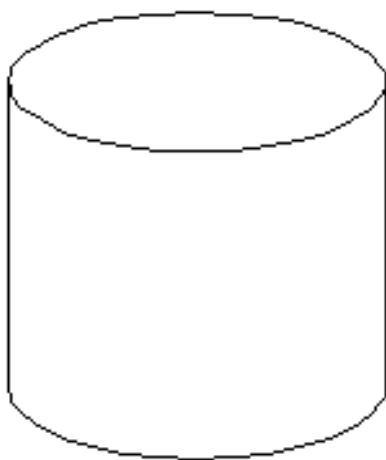
c) basic and strong electrolyte ____

d) possibly salt water ____

e) possibly distilled water ____

3. Fructose is the sugar found in honey, fruits, and berries. Of all sugars, it is the most soluble in water. An aqueous solution of fructose does not conduct electricity.

a) In the tank below, illustrate what happens when fructose ($C_6H_{12}O_6$) dissolves in water.

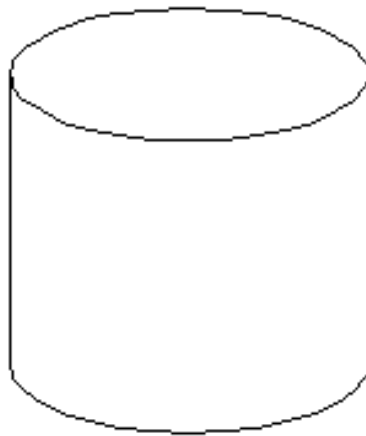


b) Explain your illustration.

c) Specify the type of dissolution that occurs.

4. A nitrous acid solution (HNO_2) is a good conductor of electricity.

a) In the tank below, illustrate what happens when nitrous acid dissolves in water.



b) Explain your illustration.

c) Specify the type of dissolution that occurs.
