NAME	
DATE	HOUR

WATER, ACIDS, BASES, BUFFERS

PROPERTIES OF WATER:

Discoulation of Mater					
DISSOCIATION OF WATER:					
PH Scale:					

Buffers:					
Description	Function	Importance			

BICARBONATE	Rucce	SVSTEM.
DICARBUNATE	DUFFFR	3131FW.

$$H_2O + CO_2 \longleftrightarrow H_2CO_3 \longleftrightarrow HCO_3^- + H^+$$

Action:	Effect:
Increase [H ⁺]	
How?	
Increase Rate &	
Depth of Respiration	

Explain how water	is able to form 4 hydrogen bonds.
ist the 5 emerger	nt properties of water.
Define the followin	g terms.
Cohesion	
Cohesion Adhesion	
	sive?
Adhesion	sive?
Adhesion	sive?

	Why does water have a greater degree of surface tension than most other liquids?
	Why does water have a high specific heat?
	What is the biological importance of water's high specific heat?
-	Why does water have a relatively high heat of vaporization?
	What is the biological importance of water's relatively high heat of vaporization?
	Why does water expand when it freezes?
	Why does ice float?
	What is the biological importance of the expansion of water when it freezes.

	E.	Solution			
Homogenous mixture of 2 or more substances					
gent					
Material being dissolved					
Solution where water is solvent					
Water loving; molecules with an affinity for water					
g; molecules that o	do not hav	ve an affin	ity for water		
atile solvent?					
ds of materials will	not disso	lve in wate	er?		
re water at 25°C: I ⁺] compare to the					
re water at 25°C:	[OH]?				
re water at 25°C: I ⁺] compare to the	[OH]? illibrium e ibe what (stablished	in pure water		
re water at 25°C: I*] compare to the ? g will affect the equent on of water. Descr	[OH]? illibrium e ibe what o chart.	stablished	in pure water will have on the		
re water at 25°C: I ⁺] compare to the ? g will affect the equence of water. Describeting the following	[OH]? illibrium e ibe what o chart.	stablished effect each	in pure water will have on the		
re water at 25°C: I ⁺] compare to the ? g will affect the equence of water. Describeting the following	[OH]? illibrium e ibe what o chart.	stablished effect each	in pure water will have on the		
	gent ng dissolved ere water is solvent g; molecules with a	E. F. s mixture of 2 or more substagent ng dissolved ere water is solvent g; molecules with an affinity ng; molecules that do not have	E. Solution F. Solvent s mixture of 2 or more substances gent ng dissolved ere water is solvent g; molecules with an affinity for water ng; molecules that do not have an affin		

20.	How	does the [H ⁺] (compare to the [O	H^{-}] in each of the foll	owing:		
	a.	A neutral solution:					
	b.	An acidic solution:					
	С.	A basic solution:					
20.	Complete the following chart.						
		[H ⁺]	рН	[OH ⁻]	рОН		
		10 ⁻²					
			4				
				10 ⁻⁴			
					2		
21.	What	What is the pH range for most biological fluids?					
		at fluid is the exception to this range?					
22.	A patient has been vomiting for a prolonged period of time.						
	a.	What effect would this have on the [H ⁺] in the blood?					
	b.	How will the bicarbonate buffer system respond to this change?					
	C.	What effect will the buffer system response have on the rate of respiration?					
	d.	If the buffer system does not return the blood pH to within the normal range or if the vomiting continues, how will the kidneys respond?					
		Will the kidneys excrete or reabsorb H+?					
		Will the kidneys excrete or reabsorb HCO ₃ ⁻ ?					