

19.2

1. $\text{pH} = -\log [1 \times 10^{-6}]$
 $\text{pH} = 6$

2. $\text{pH} = -\log [7.2 \times 10^{-9} \text{M}]$
 $= 8.14$

3. $\text{pOH} = -\log [\text{OH}^-]$
 $= -\log [3.5 \times 10^{-2}]$
 $= 1.46$

4. $\text{pOH} = ?$ $\text{pH} = 3.4$
 $\text{pOH} = 14 - \text{pH}$
 $= 14 - 3.4$
 $= 10.6$

5. a) $[\text{H}^+] = 2.5 \times 10^{-9} \text{M} = 8.6 = \text{Basic}$

b) $\text{pOH} = 12.0$ $\text{pH} = 14 - \text{pOH} = 2.0$ Acidic
 $(\text{OH}^-) 1.0 \times 10^{-12}$

c) $[\text{OH}^-] = 9.8 \times 10^{-11} \text{M}$ $\text{pOH} = 10.00$ $\text{pH} = 14 - \text{pOH}$
 $14 - 10 = 4$ acidic

d) $[\text{H}^+] = 1 \times 10^{-7} \text{M}$ - neutral

e) $\text{pH} = 0.8$ acidic

#7

6. a) $[\text{H}^+] = 1 \times 10^{-5} \text{M}$ $\text{pH} = 5$ Acidic

b) $[\text{H}^+] = 4.4 \times 10^{-11} \text{M}$ $\text{pH} = 10.36$ Base

c) $[\text{OH}^-] = 2.2 \times 10^{-7} \text{M}$ $\text{pOH} = 6.66$ $\text{pH} = 14 - \text{pOH}$
 $= 14 - 6.66$

7.34 Basic

d) $\text{pOH} = 1.4$ $\text{pH} = 14 - \text{pOH}$
 $= 14 - 1.4 = 12.6$ Basic