

ACIDS AND BASES

TEST _____

Neutralization – 1

Date: _____

1. How many ml of H_2 gas at STP can be obtained by the reaction of 400 cm^3 of HCl solution whose pH=1 with Mg metal?
A) 224 B) 336 C) 448 D) 896 E) 1120

2. How many liters of H_2 at STP would be produced by the reaction of 500 cm^3 of HCl solution whose pH = 0 and 32.5 g of zinc? (Zn = 65)
A) 2.8 B) 5.6 C) 6.12 D) 7.6 E) 22.4

3.

HCl I	Na II	NaOH III	HNO ₃ IV	HBr V
Zn	H ₂ O	Al	Cu	Mg

 In which of the containers will be different gas evolution?
A) I B) II C) III D) IV E) V

4. $Ca + 2HCl \Rightarrow CaCl_2 + H_2$. How many gram H_2 is produced when enough Ca react with 4 L HCl solution with pH = 1?
A) 0.1 B) 0.2 C) 0.3 D) 0.4 E) 0.5

5. What would be the pH when 2.3 g solid Na is added to a 1L solution with pH 1? (Na: 23)
A) 2 B) 3 C) 7 D) 11 E) 12

6. How many ml of pure water must be added into 10 ml solution with pH = 13 to observe pH = 12?
A) 10 B) 100 C) 90 D) 990 E) 900

7. What would be the pH of the resulting solution, after adding 0.09 mol NaOH to the 0.01 M 10 L HCl solution by don't changing the volume?
A) 2 B) 3 C) 4 D) 12 E) 13

8. 2.5 mol NaOH is mixed with 0.5 mol HCl. To which volume of the solution must be completed with the pure water that the solution's pH would be 13?
A) 1 B) 2 C) 10 D) 20 E) 5

9. How many liters of KOH solution whose pH is 13 must be mixed with 0.5 M 20 ml H_2SO_4 solution that the resulting solution's pH would be 7?
A) 0.1 B) 0.2 C) 0.3 D) 0.4 E) 0

10. When $1 \cdot 10^{-3}$ mol NaOH is added to 0.001 M 500 ml HCl solution by don't changing the volume, what would be the pH of the resulting solution?
A) 2 B) 3 C) 4 D) 10 E) 11

11. What would be the pH of the resulting solution when 20 ml 0.075 M HCl solution is mixed with 80 ml 0.02 M NaOH solution?
A) 2 B) 3 C) 7 D) 11 E) 12

12. How many moles solid KOH can be added to 0.01 M 10 L HCl solution by don't changing the volume to make the final pH 12?
A) 8 B) 4 C) 2 D) 0.2 E) 0.4