Philadelphia University
Faculty: Science
Department: Basic sciences

General chemistry 10212109
Midterm Exam , complete

Exam time 50 min. **Date: 26 / 12 /2020**
Name :…… **Section (الشعبة) :** …….
Name:…….. **Student No.:** … ……..

1- **Determine the simplest empirical formula of the drug methamphetamine with the following composition by mass: 64.68 % C; 8.685 % H; 7.54 % N; 19.09 % Cl.**

2- If 25 ml of 0.65 M NaCl is added to 35 ml of 0.55 M $AgNO_3$, what mass in grams of AgCl precipitate? (4 POINTS)

$$NaCl + AgNO_3 \longrightarrow AgCl + NaNO_3$$

3- After standardization 24.0 ml of $Ba(OH)_2$ solution with 2.0 g KHP, the same $Ba(OH)_2$ solution neutralized with 15 ml of HCl solution. Calculate the concentration of HCl solution? Molar mass of KHP = 204.2 g/mol

$$Ba(OH)_2 + KHP \longrightarrow NaKHP$$

$$Ba(OH)_2 + HCl \longrightarrow NaCl + H_2O$$

4- Use the following atoms to fill this table:

Pa, Al, Po, I, Re, S, Ba, Ar, K, Cl

1- Metalloid	
2- Halogen	
3- Transition metal	
4- Noble gas	
5- Alkaline Earth Metal	
6- Two atoms have same physical and chemical properties	
7- Metal exists in Group 3A	
8- Metal in Group 7B	