

University of Salahaddin  
College of Agriculture  
Engineering science



Sub: inorganic chemistry  
Stage: second  
Time: 1hour  
Date: 13/11/2023

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**Name:**

**Q1 / Answer of the followings: (Only 6) (60 marks)**

1. Write the mechanism for preparation Chrome Alum from  $K_2Cr_2O_7$ ?

2. Write uses for each one (CuI and NaCl )

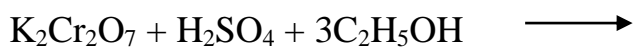
- |    |    |
|----|----|
| a. | a. |
| b. | b. |

3. Enumerate properties of c Copper (I) iodide?

- a.
- b.
- c.

4. Define recrystallization and write chemical name compound purified in laboratory?

5. Complete the following equation :



6. Prepare 0.1M of HCl in 250ml distilled water.(sp.gr = 1.19 , % = 37)

7. Define table salt and write name of chemical compound used to purification?

**Q2/ Choose the correct answer: (40 marks)**

1. Chrome alum may be prepared by reducing an -----of potassium dichromate.  
a. Basified solution    b. Acidified solution    c. Neutral solution
2. ----- is double salt.  
a. Copper iodide    b. Chrome alum    c. Potassium chromate
3. CuI is poorly soluble in water, but it dissolves in the presence of -----to give the linear anion  $[\text{CuI}_2]^-$ .  
a. FI                      b. BrI                      c. KI
4. Recrystallization is one of the most important methods used to purify----- compound.  
a. Gas                      b. Liquid                      c. Solid
5. Barium chloride  $\text{BaCl}_2$  (25%) is prepared by mixing -----.  
a. (25ml water+75g  $\text{BaCl}_2$ )                      b.( 25g  $\text{BaCl}_2$ +75 ml water)  
c. ( 25ml  $\text{BaCl}_2$ +75 ml water)
6. Copper iodide is ----- color but the color change to ----- due to impurities.  
a. White-reddish violet    b. White crystal-reddish brown  
c. White -reddish brown
7. ----- used as feedstocks for further chemical syntheses.  
a. Sodium chloride    b. Sodium iodide    c. Copper iodide