**Q1: 1. How can you identify these samples? Compare it. (20 marks)**

**2. What is the name of this test?**

**3. Define this test.**

**4. Write the measurment equation of it .**

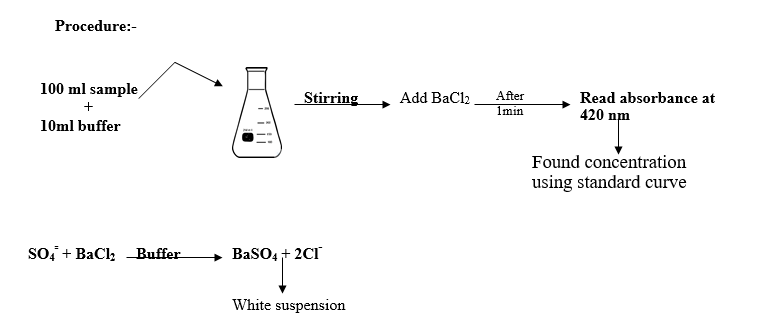


**Q2: A/ The following procedure is used for determination of …………………….**

**B/ This procedure have a name, Write the name of this method.**

**C/What is the component of buffer solution used in this procedure?**

**D/ What is the reaction (principle) that happened in this procedure? (20 marks)**



**Q3: A/ Identify this figure, how can you recognize it in the lab?**

**B/ What is the relationship between this organism and water pollution?**

**C/ Write about some other similar species that are related to water pollution.**

**(15 marks)**

**Q4: A/Write the (name) and the (use) of the following instrument. (15 marks)  
 B/ What are the advantages of this test?  
 C/ What are the differences between this test and the classical test?**



**Q5: Choose suitable phrases for the following criteria: (10 marks)**

1. The permissible limit for nitrate NO3 in drinking water is:

a) 10 mg/l b) 30 mg/l c) 100 mg/l

2. The wave length of spectrophotometer that used for determination of Ammonia NH3 in water is:

1. 640 nm b) 275 nm c) 885 nm

3. The preferable method for determination of PO4 water is:

a) Dichromate reflux method b) Ascorbic acid c) Winkler method

4. The phenomenon that caused by high levels of N and P compounds in water called:

a) Self-purification b) Eutrophication c) Ammonification

5. Water quality is considered “very good” water when the BOD concentration ranged between:

a) 1-2 mg/l b) 3--5 mg/l c) 6-9 mg/l

**Q6: A/ Answer (4) of the following questions: (20 marks)**

1. What are the major sources of NO2 in water?
2. What are the differences between BOD and COD?
3. What are the factors that affect the TSS of water?
4. What are the effects of ammonia (NH3) in water?
5. Write the steps of determination the PO4 concentration in water**?**
6. What are the effect of SO4 in water?