

**BOWEN UNIVERSITY, IWO, OSUN STATE**  
*(of the Nigerian Baptist Convention)*  
**COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE (COAES)**  
**BIOCHEMISTRY PROGRAMME**

**SECOND SEMESTER, 2022/2023 SESSION**

**COURSE CODE: BCH 345**

**COURSE TITLE: PRACTICAL BIOCHEMISTRY III**

**CREDIT UNIT: 1**

**Time: 1 hour**

**INSTRUCTION: ANSWER ALL QUESTIONS**

You are provided with sample X, carry out the following experiments.

1. Sample X is reacted with blue litmus paper.

(a) What is your observation in the reaction of sample X with blue litmus paper?

(b) What will be the outcome, if the reaction of sample X with blue litmus paper is allowed to stand for a long time?  
**(10 marks)**

2. Take 5ml. of sample X in a test tube and add 1ml of concentrated  $\text{HNO}_3$  and then 2ml of 3% silver nitrate solution.

(a) Record your observation.

(b) Why do you add Concentrated  $\text{HNO}_3$  into sample X?

**(10 marks)**

3. Into 10ml of sample X, add a little concentrated ammonia and boil for 5 mins.

(a) Record your observation.

Filter the contents upon cooling and discard the filtrate, wash the residue with little water and discard the washings. Then, dissolve the residue in hot diluted acetic acid and collect the solution in a test tube.

Divide this solution into two portions, A and B, and into portion A, add little concentrated  $\text{HNO}_3$  and 5ml of ammonium molybdate solution and boil for 5 mins.

(b) Record your observation. Then to portion B, add 5ml. of 2% potassium oxalate solution.

(c) Record your observation

**(10 marks)**

4. To 10 ml of sample X, add a drop of phenolphthalein and 0.1M NaOH drop by drop, till the colour becomes faintly pink. Then boil and hold a glass-rod dipped in phenolphthalein at the mouth of the test tube.

(a) Record your observation.

(b) Why did you make the reaction alkaline before boiling?

(c) What will happen if the reaction is strongly alkaline?

**(10 marks)**