

Eastern University, Sri Lanka
First Year Second Semester Examination in Agriculture – 2012/2013
AC 1201 – Biochemistry (3: 30/30)
Practical Examination (Group III & IV)

Answer all Questions

Time allowed: 03 hours

1. (a) Identify the given compounds **P** & **Q** using appropriate tests. Write down all the observation and chemical reactions involved in each step of identification.

(b) Name three colour reaction tests carried out during the qualitative tests for proteins and explain one of them.

2. a) Estimate the percentage of Alanine in the solution **X** provided.

b) Write down the chemical reactions and the colour changes involved in the above estimation.

c) Why neutralization of Formaldehyde and Alanine are important in the above estimation.

3. a) Identify the sugars **S₁** and **S₂** into Reducing / Non-reducing, using appropriate tests.

b) Write down the chemical reactions involved in the above estimation.

c) Write down a method to differentiate the following reducing sugars.

 i) Glucose ii) Fructose iii) Galactose

4. a) Estimate the concentration of dextrose of the given sample **R**.

b) Write down the principle of estimation of concentration of dextrose

c) Give the reason for following practices

 i) Addition of porcelain pieces

 ii) Addition of indicator in middle

 iii) Provision of Heat

5. a) How do you test the emulsion formation using oil and water.
- b) "8 ml protein solution was taken in a test tube; same volume of oxalic acid was added and mixed. Then the tube was inclined and Conc. H_2SO_4 was added carefully down the inside of the tube to form a separate lower layer". Name the test; give your observations and the reasons for those observations.
- c) Explain the "Silver mirror test" in the qualitative determination of Carbohydrate.
- d) How do you identify the element 'Phosphorous' present in a food sample?
