

GURUDAS COLLEGE

B. Sc. SEMESTER V (Honours) Examination

Online Practical Examination, 2020

Subject: BOTA

Course: BOT-A-CC-5-12-P

Course Name: BIOCHEMISTRY

Full Marks: 30

Date of Examination: 18/3/2021

1. a) i) What are the components of the Lowry's mixture and in what proportions they are mixed in the estimation of protein by Folin phenol reagent? What is the colour of the complex that is formed in this experiment and on what factor the intensity of the colour depends? 4+2
- ii) Write down the procedure for estimation of total titrable acidity of lemon. 4

Or

- b) What are the requirements for the experiment of Glucose estimation by Benedict Quantitative Reagent (BQR)? Which reagents are taken in the conical flask and which reagent is taken in the burette? What is the condition and what is the end point of titration in this experiment? What amount of glucose is needed to make 225ml of 2% glucose solution? 3+3+2+2

2. a) Give an example of a reducing sugar and a non-reducing sugar. What is the reason for the formation of a purple ring in Molisch's Test? Write down one confirmatory test for detection of a reducing sugar. Where do we find starch in a plant tissue and name a test for determining starch in a plant sample? Why Sucrose is hydrolyzed before performing the detection test.

2+2+2+ (1+1) +2

Or

- b) Write down the requirement for detection of protein in a plant sample. What is the reason behind formation of blue colour in Ninhydrin test for the detection of proteins? Explain the procedure for Biuret test. What is the confirmatory test for detection of Methionine? What colour is detected in the Adamkiewicz Experiment and what does it infer? Explain the nature of ppt formed in Xanthoprotein test.

2+2+2+ (1+1)+2

3. a) i) In the Urease activity estimation experiment what is the source of the enzyme? What is the historical significance of this enzyme? Write the biochemical reaction that takes place in this experiment. Write down the requirements of this experiment. 1+2+2+3

ii) Write down the requirements for detection of various elements in plant ash. 2

Or

b) i) In catalase assay experiment, why is the burette reading always less in the experimental set than the blank set? What is the end point of this experiment? What is Normality? Calculate the amount of NaOH required to prepare 200 mL of (N/10) NaOH solution [Mol. Wt. of NaOH is 40]. 2+1+2+3

ii) For detection of sulphur in plant ash, a white crystalline ppt is formed. What is the principle behind the experiment? 2

Instructions for submission of answer scripts

1. Write the front page/top sheet as per instruction. Give page numbers to each page.
2. Write your CU Roll number in each page.
3. Scan the pages in sequence and make a single PDF file.
4. Rename file as per instruction.
5. Email the PDF file within the stipulated time to the following email addresses:

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