

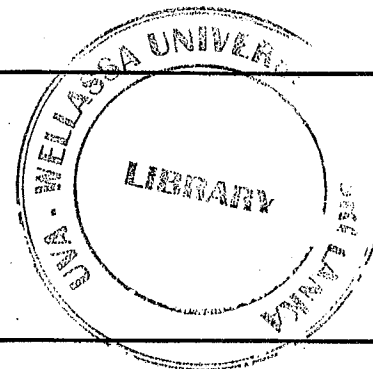
Uva Wellassa University of Sri Lanka
Faculty of Science & Technology
Science and Technology Degree Programme
1st Semester Examination – March/ April 2013



SCT 317-1 Food Chemistry

Instructions

No. of questions : Four (04)
Answer all questions.
No. of pages : Two (02)
Time allocation : One (01) hour
Total marks allocated : 100%



1.
 - a. Define the term “Water Activity” (05 marks)
 - b. Briefly explain the relationship between Water Activity and Physical Properties of food using examples. (08 marks)
 - c. Discuss the importance of controlling Water Activity in food products. (12 marks)

2.
 - a. Differentiate Saturated Fatty Acids and Unsaturated Fatty Acids using one example for each fatty acid. (08 marks)
 - b. “HDL cholesterol is good for health.” Comment on this statement. (05 marks)
 - c. Briefly explain the rancidity of fatty food products. (12 marks)

- 3.
- a. Name the monomer of pectin. (02 marks)
 - b. List two (02) types of pectin based on degree of esterification. (02 marks)
 - c. Briefly discuss the mechanism of gelling of types of pectin mentioned in 01.b. (12 marks)
 - d. "Polysaccharides have two types of arrangement of molecules". Briefly explain the statement using examples. Use diagrams where necessary. (09 marks)
4. Maillard Browning is one of desirable chemical reactions that occurs during browning of coffee beans.
- a. Name the actual reactant components of Maillard Browning. (02 marks)
 - b. List the resultant compounds of Maillard Browning. (03 marks)
 - c. Illustrate two (02) ways of Maillard Browning reactions based on type of sugar. (08 marks)
 - d. Briefly discuss the four (04) levels of structure in Proteins. (12 marks)