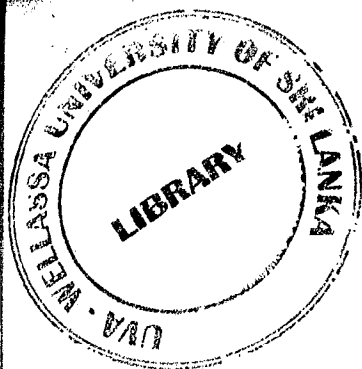




Uva Wellassa University, Sri Lanka

End Semester Examination – February/March 2012

SCT 317-1 Food Chemistry

Time: One (01) hour



Total four (04) Questions

Answer all questions.

1.

i. Explain the functions of,

a) Sucrose in jam

b) Lactose in milk

(10 marks)

ii. Why polyalcohol is an important agent in food industry?

(05 marks)

iii. Jells are usually made by cooling the hot aqueous mixture of sugar, acid and pectin.

The high quality jells are translucent and firm enough to hold the shape. What are the factors affecting on firm jell formation?

(10 marks)

2.

i. Discuss the relationship between water activity and food quality.

(10 marks)

ii. "LDL cholesterol is not good for health". Comment on this statement.

(05 Marks)

iii. "Unfavorable odor and taste can be generated from polythene covered dried fat food products."

a) Identify and briefly explain the chemical background of the above phenomenon.

(06 marks)

b) How can you avoid this phenomenon?

(04 marks)

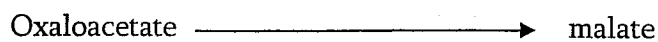
3.

i.

a) Briefly explain the chemical background of enzymatic browning. (06 marks)

b) Discuss the methods to prevent the enzymatic browning. (10 marks)

ii. NADP Malate Dehydrogenase is an enzyme which catalyses following reaction.



Calculate the turnover number for the above reaction.

Assume that $V_0 = 0.25 \text{ S}^{-1}$, $[S] = 0.5 \text{ mM}$, $K_m = 0.1 \text{ mM}$, $[E] = 1.25 \text{ M}$ (09 marks)

4.

i. Why the presence of protein in the diet is important? (10 marks)

ii. In what ways proteins are important in Food Industry? Your answer should include at least three examples. (15 marks)