

Cork Institute of Technology
Bachelor of Science in Food Science and Technology - Award
December 2004
Food Chemistry
(Time: 3 Hours)

Instructions

Answer any **FIVE** questions.

Examiners: Mr. E. Fitzgerald

Prof. R. O'Kennedy

All questions carry equal marks.

- Q1. Describe, with the aid of a fully worked set of sample calculations, how you would carry out a full compositional analysis of a butter sample.
- Q2. Describe the so-called “diseases of affluence”. Comment on their significance, their incidence and public health measures which can be taken to control them.
- Q3. Write short notes on three of the following:
- (a) mutagens and teratogens
 - (b) carcinogenic chemicals
 - (c) manual handling in the laboratory
 - (d) safety with asbestos
 - (e) chemical burns
- Q4. Discuss the chemistry of bread making with particular emphasis on gas generation, the dough structure and bread staling.

- Q5. Write short notes on three of the following:
- (a) nutrition of premature babies
 - (b) folic acid
 - (c) anaemia
 - (d) calcium metabolism
 - (e) lactose intolerance
- Q6. Discuss the nutritional and functional roles of lipids in foods.
- Q7. Write an essay on the importance of proteins in the structure and sensory characteristics of foods.
- Q8. Discuss the problems of intolerance to foods. Comment on the causes and effects and outline the responsibility the food industry has to affected consumers.
- Q9. Discuss the importance of complex carbohydrates in foods.