

**CORK INSTITUTE OF TECHNOLOGY**  
**INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

**Autumn Examinations 2012**

**Module Title: Food and Healthcare Toxicology**

**Module Code:** CHEM 7003

**School:** Biological Science

**Programme Title:** Bachelor of Science in Food Science and Technology – Year 3  
Bachelor of Science (Honours) in Nutrition & Health Science – Year 3

**Programme Code:** SFSTE\_7\_Y3  
SNHSC\_8\_Y3

**External Examiner(s):** Dr Don Faller  
**Internal Examiner(s):** Dr Helena Stack

**Instructions:** Answer Question 1 and Two other questions. All questions carry equal marks.

**Duration:** 2 Hours

**Sitting:** Autumn 2012

**Requirements for this examination:**

**Note to Candidates:** Please check the Programme Title and the Module Title to ensure that you have received the correct examination paper.  
If in doubt please contact an Invigilator.

Answer Question 1 and two other questions.

**Q1.** (a) Write notes on the following heavy metals:

- (i) Chromium (5 marks)
- (ii) Lead (5 marks)

(b) Describe an experiment you would carry out to determine the acute toxicity of a water sample using *Daphnia magna* Straus. (10 marks)

**Q2.** Disposition is a factor that affects toxic response. Discuss under the following headings:

- (a) Absorption (10 marks)
- (b) Sites of absorption (4 marks)
- (c) Distribution (3 marks)
- (d) Excretion (3 marks)

**Q3.** Write an essay on fungal toxins. (20 marks)

**Q4.** Write notes on four of the following: (20 marks)

- (a) Glucoalkaloids
- (b) Cyanogens
- (c) Residues in Foods
- (d) Dioxins
- (e) Shellfish toxicants
- (f) Teratogenesis