

**CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

Autumn Examinations 2012/13

Module Title: Environmental Science and Industrial Hygiene CA

Module Code: ENVI7001

School: Science

**Programme Title: BSc in Applied Biosciences with Biotechnology
BSc in Nutrition and Health Science
BSc in Food and Health Science
BSc in Agriculture**

**Programme Code: SBIBI_7_Y3
 SNHSC_8_Y3
 SFSTE_7_Y3
 BAGRI_7_Y3**

**External Examiner(s): Dr. Anne Nelson
Internal Examiner(s): Dr. Rosemary Rea**

Instructions: Answer **question 1** and **2** other questions. All questions carry equal marks.

Duration: Time = 2 hours

Sitting: Autumn 2013

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.

- Q1.** Following a suspected contamination of a municipal drinking water supply discuss the laboratory tests used to assess water quality. **(50 marks)**
- Q2.** Discuss the treatment of wastewater using the following headings:
- Categories of pollutants in wastewater **(8 marks)**
 - Preliminary treatment **(6 marks)**
 - Primary treatment **(6 marks)**
 - Secondary treatment **(15 marks)**
 - Disinfection **(6 marks)**
 - Treatment of raw sludge **(9 marks)**
- (50 marks)**
- Q3.** (a) Discuss the following disposal methods for municipal solid waste:
- Open dumping **(4 marks)**
 - Traditional sanitary landfill **(16 marks)**
 - Incineration **(12 marks)**
 - Ocean dumping **(4 marks)**
- (b) Describe one example of a green alternative for dealing with municipal solid waste. **(14 marks)**
- (50 marks)**
- Q4.** (a) Describe the classes of environmental stresses that can be encountered in the workplace. Discuss possible routes of entry into the body. **(16 marks)**
- (b) Discuss the generation of energy using nuclear power. **(34 marks)**
- (50 marks)**