

**CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

Semester 2 Examinations 2010/2011

Module Title: Biomanufacturing

Module Code: BIOL 8012

School: Science

Programme Title: Bachelor of Science (Honours) in Nutrition and Health Science

Programme Code: SNHSC_8_Y2

External Examiner(s): Dr. A. Gallagher

Internal Examiner(s): Ms. D. Gilroy

Instructions: Answer **Three questions.**

Duration: 2 Hours

Sitting: Summer 2011

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. Write a detailed account on the use of modified atmosphere packaging (MAP) **or** food irradiation in biomanufacturing. (25 Marks)
- Q2. Discuss sensory evaluation of foods in terms of quantitative descriptive analysis. (25 Marks)
- Q3. Write notes on **each** of the following toxicological issues pertaining to food ingredients or pharmaceutical products:
- (i) NOAEL
 - (ii) ADI
 - (iii) MOS
 - (iv) TI
 - (v) MRL
- (25 Marks)
- Q4. Describe the HLB concept and the role of emulsifiers used in biomanufacturing. (25 Marks)
- Q5. With respect to GM soya, describe the following:-
- (i) Development of herbicide resistance
 - (ii) Potential benefits
 - (iii) Consumer concerns
 - (iv) Methods of detection
- (25 Marks)