

**CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

Autumn Examinations 2014

Module Title: Food and Healthcare Biotechnology CA

Module Code: BIOL 7010

School: Biological Science

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

Programme Code: SNHSC_8_Y3

External Examiner(s): Prof. Torres Sweeney
Internal Examiner(s): Dr Helena Stack

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

Duration: 2 Hours

Sitting: Autumn 2014

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. Write short notes on each of the following:

- (i) Probiotics (5 marks)
- (ii) Prebiotics (5 marks)
- (iii) Yoghurt manufacture (5 marks)
- (iv) Overview of rChymosin production (5 marks)

Q2. Write an essay on 'starter cultures' including the following headings: (20 marks)

- (i) Bacterial starter cultures
- (ii) Yeast starter cultures
- (iii) Mould starter cultures

Q3. Write an essay on the generation of a recombinant DNA molecule. (20 marks)

Q4. Write short notes on each of the following:

- (i) Batch fermentation (5 marks)
- (ii) Recombinant insulin production (5 marks)
- (iii) Recombinant tryptophan overproducer (5 marks)
- (iv) Biotechnology and patents (5 marks)