

**CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

Autumn Examinations 2013

Module Title: Food and Healthcare Microbiology

Module Code: BIOM 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
Bachelor of Science (Honours) in Herbal Science – Year 3

Programme Code: SFSTE_7_Y3
SNHSC_8_Y3
SHERB_8_Y3

External Examiner(s): Dr Gillian Gardiner, Dr Julia Green, 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 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.

Answer question 1 and two other questions.

Q1. (a) Write a short note on the following:

- (i) McFarland Standard (3 marks)
- (ii) Baird Parker agar (3 marks)
- (iii) Multi-test system for rapid identification of bacteria (4 marks)

(b) Outline and describe the steps involved in the bacteriological examination of water. (10 marks)

Q2. Write short notes on the following (give an example of each):

- (i) Diauxic growth (4 marks)
- (ii) Synergistic growth (4 marks)
- (iii) Food intoxication (4 marks)
- (iv) Pathogenicity island (4 marks)
- (v) Defined starter cultures (4 marks)

Q3. Protozoan organisms are important food pathogens. Discuss this in relation to one protozoan organism you have studied. Use the following headings in your answer.

- (i) Disease transmission (3 marks)
- (ii) Pathogenesis (14 marks)
- (iii) Clinical presentations (3 marks)

Q4. *Staphylococcus* is one of the top five pathogens contributing to domestically acquired foodborne illness (Centre for Disease Control). Discuss.

(20 marks)