

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

**Autumn Examinations 2011**

**Module Title: Fundamentals of Microbiology II**

**Module Code:** BIOM6006

**School:** Biological Science

**Programme Title(s):** Bachelor of Science in Applied Biosciences & Biotechnology – Year 2  
Bachelor of Science (Honours) in Nutrition & Health Science – Year 2  
Bachelor of Science (Honours) in Pharmaceutical Biotechnology – Year 2

**Programmes Code(s):** SBIOS\_7\_Y2  
SNHSC\_8\_Y2  
SPHBI\_8\_Y2

**External Examiner(s):** Dr Anne Nelson, Dr Alison Gallagher, Dr Jerry Bird

**Internal Examiner(s):** Dr Deirdre Gilroy

**Instructions:** Answer THREE questions. All questions carry equal marks

**Duration:** 2 Hours

**Sitting:** Autumn 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.  
If in doubt please contact an Invigilator.

- Q1.** (a) The virus life cycle can be divided into 7 stages, briefly describe these. (14 marks)  
(b) Describe how bacteriophages are cultured in the laboratory. (6 marks)  
(20 Marks)
- Q2.** (a) Write notes on members of the genus *Pseudomonas* (10 marks)  
(b) Outline the key reactions used to differentiate between *Escherichia coli* and *Enterobacter aerogenes* (10 marks)  
(20 Marks)
- Q3.** Write concise notes on **two** of the following genera:  
*Staphylococcus*  
*Streptococcus*  
*Salmonella* (20 marks)  
[2 x 10 marks]
- Q4.** (a) Describe the fungus responsible for Dry Rot (8 marks)  
(b) Draw and label the structure of an *Aspergillus* species (4 marks)  
(c) Write short notes on *Cryptosporidium parvum* (8 marks)  
(20 Marks)
- Q5.** Outline characteristics of representative species of the genus *Bacillus* and *Clostridium* (20 marks)