

**CORK INSTITUTE OF TECHNOLOGY  
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

**Semester 1 Repeat Examinations 2010**

**Module Title: Introductory Microbiology**

**Module Code:** BIOM 6008

**School:** Science

**Programme Title:** BSc (Hons) in Herbal Science  
**Programme Code:** CR\_SHERB\_8\_Y2

**External Examiner(s):** Professor Elizabeth Williamson  
**Internal Examiner(s):** Dr PJ Collins/Dr Helen O'Shea

**Instructions:** Answer **2 Questions from Section A** and **2 Questions from Section B**

**Duration:** 2 hours

**Sitting:** Autumn 2010

**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.

### **Section A**

1. a) Explain the lytic cycle of viruses (10 marks)  
b) Describe what is meant by lysogeny (5 marks)  
c) Write a brief note on emerging viruses (10 marks)
2. Outline the process of DNA replication with the aid of a diagram. Name and describe the function of each of the enzymes involved in the process. (25 marks)
3. Discuss environmental conditions which effect prokaryotic cell growth and death. (25 marks)

### **Section B**

4. Distinguish between prokaryotic and eukaryotic cells. (25 marks)
5. (i) Write a short note on any three of the following:
  - a. Extrachromosomal DNA
  - b. Prokaryotic cell wall
  - c. Capsules
  - d. Flagella/Pili(15 marks)
- (ii) Describe what the following terms mean: Disinfection, Bacteriostatic and the Disk-Diffusion Method. (10 marks)
6. (i) Compare and contrast complex, selective and defined media. (20 marks)
- (ii) Briefly describe the main differences between aerobic and anaerobic bacteria. (5 marks)
7. Outline in detail the vectors, transmission and pathogenesis of disease. (25 marks)