

CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

Semester 1 Examinations 2009/10

Module Title: Introductory Microbiology

Module Code: BIOM6008

School: School of Science

Programme Title: Bachelor of Science (Honours) in Herbal Science

Programme Code: SHERB_8_Y2

External Examiner(s): Prof. E. Williamson, Dr. D. Clare
Internal Examiner(s): Dr. PJ Collins

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

Duration: 2 hours

Sitting: Winter 2009

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

- Q1.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)
- Q2. 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)
- Q3. Outline in detail 5 chemical means which can be employed to control microbial growth. (25 marks)

Section B

- Q4. Describe the different modes of action of antibiotics on prokaryotic cells. (25 marks)
- Q5. (i) Write a short note on any three of the following:
a. Plasmids
b. Prokaryotic cell wall
c. Endospores
d. Flagella (15 marks)
- (ii) Describe what the following terms mean: Disinfection, Bacteriostatic and the Disk-Diffusion Method. (10 marks)
- Q6.(i) Compare and contrast complex, selective and defined media. (20 marks)
(ii) Briefly describe the different oxygen requirements for bacteria. (5 marks)
- Q7. Outline in detail the vectors, transmission and pathogenesis of disease. (25 marks)