

CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

Semester 1 Examinations 2011/12

Module Title: Pharmaceutical Microbiology

Module Code: BIOM 8002

School: Biological Sciences

Programme Title(s): Bachelor of Science (Hons) in Pharmaceutical Biotechnology
Bachelor of Science (Hon) in Nutrition & Health Science

Programmes Code(s): SPHBI_8_Y4
SNHSC_8_Y4

External Examiner(s): Dr J. Bird, Dr A. Gallagher

Internal Examiner(s): Ms S. Bullman

Instructions: Answer Question 1 and TWO other Questions

Duration: 2 Hours

Sitting: Winter 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.

Q 1 Write short notes on **4** of the following:

- a. Nucleotide analogs as antivirals.
- b. Antifungal drugs.
- c. Compare and contrast the Kirby-Bauer test (diffusion susceptibility), Minimum Inhibitory Concentration Test (MIC) and Minimum Bactericidal Concentration test (MBC).
- d. Production of monoclonal antibodies.
- e. The differences between a toxoid vaccine and an attenuated vaccine.
- f. Antibiotic misuse and how antibiotic resistance can be prevented. **(40 marks)**

Q 2 Using examples outline the modes of action and mechanisms of resistance of drugs that affect DNA synthesis in bacteria. **(30 marks)**

Q 3 List 5 types of vaccines and discuss 3 in detail. **(30 marks)**

Q 4 Distinguish between an antiseptic, a disinfectant and a preservative. Describe in detail the action of 5 antiseptics, preservatives or disinfectants. **(30 marks)**