

Cork Institute of Technology
Bachelor of Science (Honours) in Applied BioSciences –Award
(NFQ – Level 8)
Autumn 2006
ADVANCED MICROBIAL TOPICS
(Time: 3 hours)

Answer FOUR Questions.
One from each section (A, B and C)
and one other of your choice.
Please use separate answer books for each section.

Examiners :
Dr. A. Coffey
Dr. D. Gilroy
Dr. H. O' Shea
Dr. R. Fitzgerald

Section A-Microbial Biotechnology

- Q1. Give an account of commercial yeast culture production and describe the application of yeast in brewing. (25 marks)
- Q2. Give a detailed account of expression vectors. (15 marks)
Discuss the essential components of a secretion vector. (10 marks)

Section B – Analytical Microbiology

- Q.3. Describe the principle and applications of **either**:
(i) Membrane filtration **or**
(ii) Luminescence-based techniques for microbiological analysis.
(25 Marks)

- Q.4. (a) Genetic procedures for microbial typing are an alternative to existing phenotypic methods.

Discuss this statement in relation to the DNA amplification strategies you have studied.

OR

- (b) Discuss the historical aspects and future prospects of rapid and instrumental microbiological methodologies. (25 marks)

Section C – Virology

Q.5. Discuss the family Rhabdoviridae.

(25 marks)

Q. 6. Discuss virus vaccines.

(25 marks)