

**CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

Autumn Examinations 2009/10

Module Title: 21st Century Health C/A

Module Code: PHOL6004

School: Science

Programme Title: BS Science in Applied Biosciences
B.Sc. (Hons) in Biomedical Science

Programme Code: CR_SBIOS_7_Y2
CR_SBMSC_7_Y2

External Examiner(s): Dr. Don Faller
Internal Examiner(s): Anna Murphy

Instructions: Answer any four Questions

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.

- Q1(a) Describe in detail, giving examples, the clinical parameters that can be used to measure health and wellbeing. (8 marks)
- (b) Write a brief note on the adverse effects uncontrolled Diabetes can have on the human body. (9 marks)
- (c) Distinguish between a benign and a malignant tumour. List the main methods by which a malignant tumour can spread in the body. (8 marks)
- Q2(a) Describe in detail the main dietary changes that can be made to reduce the risk from cancer in the body. (8 marks)
- (b) List the main factors that contribute to the formation of free radicals in the body. Describe briefly how the body naturally and through diet defends itself against these free radical attacks. (9 marks)
- (c) List the main factors that have contributed to the increase in antibiotic resistance in microbes. (8 marks)
- Q3(a) Explain briefly the principles of the Food Pyramid to include the benefits of its structure/design. (8 marks)
- (b) Write a brief note on Cholesterol to include:
- (i) Effects of LDL and HDL cholesterol on the body
 - (ii) Effects of Dietary fats on LDL and HDL cholesterol levels in the body
 - (iii) Type of foods that lower cholesterol levels in the body
- (9 marks)
- (c) List the main causes of strokes in the body. State the main factors that increase a person's risk of getting a stroke. (8 marks)
- Q4(a) Define the term "Atherosclerosis". List the main factors that contribute to the formation of atherosclerosis in the body. (9 marks)
- (b) Distinguish between Type 1 and Type 2 Diabetes to include control methods in the body. (8 marks)
- (c) Distinguish between Primary Tuberculosis and Secondary Tuberculosis. (8 marks)

Q5(a) Describe the main health consequences that can occur in the body as a result of obesity. (9 marks)

(b) Distinguish between Healthcare Associated MRSA and Community Associated MRSA to include the different risk factors for both. (8 marks)

(c) Write a note on the **two** main factors contributing to physical deterioration or degeneration in the human body. (8 marks)

Q6(a) Write a note on Pre-Diabetes to include definition, diagnosis method and the importance of diagnosing the pre-diabetes stage. (10 marks)

(b) Describe the health benefits of the recommended five portions of fruit and vegetables per day in disease prevention. (8 marks)

(c) Write a note on Angina to include causes and symptoms. (7 marks)