

**CORK INSTITUTE OF TECHNOLOGY**  
**INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

**Autumn Examinations 2014**

**Module Title: Introduction to Quality Systems (CA)**

**Module Code: BIOT6005**

**School:** Science

**Programme Title:** BSc (Hons) in Herbal Science  
BSc (Hons) in Nutrition & Health Science  
BSc (Hons) in Pharmaceutical Biotechnology  
BSc in Applied Biosciences & Biotechnology  
BSc in Agriculture  
BSc in Horticulture

**Programme Code:**

**SPHB1 8 Y2**  
**SHERB 8 Y2**  
**SNHSC 8 Y2**  
**SBIOS 7 Y2**  
**BHORT 7 Y3**  
**BAGRI 7 Y3**

**External Examiner(s):** Professor Torres Sweeney

**Internal Examiner(s):** Anne Ward

**Instructions:** Answer **FOUR** questions only. All questions carry equal marks.

**Duration:** 2 hr

**Sitting:** Autumn 2014

**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) Define each of the following:

- (i) Specification
- (ii) Quality characteristic
- (iii) Standard
- (iv) Non-conforming product

(8 marks)

(b) What is a quality audit?

(4 marks)

(c) Write a brief overview of:

- (i) an audit plan
- (ii) performance of an audit

(5 marks)

(5 marks)

(d) List the main types of audit

(3 marks)

Q2. (a) Write a detailed account of documentation in a quality management system under the following headings:

- (i) Quality manual
- (ii) Standard Operating Procedures
- (iii) Batch manufacturing records

(9 marks)

(5 marks)

(5 marks)

(b) Define each of the following:

- (i) Quality of Design
- (ii) Quality of Conformance

(3 marks)

(3 marks)

Q3. (a) Discuss the importance of quality circles for quality improvement under the following headings:

- (i) Quality Circle components
- (ii) Operation of Quality Circles
- (iii) Benefits of quality circles

(6 marks)

(5 marks)

(5 marks)

(b) List two other types of quality improvement team

(4 marks)

(c) Write a brief note on training in quality

(5 marks)

Q4. (a) Write a brief overview of the seven Quality Control Problem Solving Tools (21 marks)

(b) List the main stages in a typical problem solving process (4 marks)

Q5. (a) What is benchmarking? (6 marks)

(b) What are the benefits of benchmarking in a company (7 marks)

(c) List three areas of an organisation that can be benchmarked (6 marks)

(d) List three sources of data that organisations can use to benchmark (6 marks)

Q6. (a) Define each of the following quality cost categories:

(i) Cost of Conformance (COC) (5 marks)

(ii) Cost of Non-Conformance (CONC) (5 marks)

(b) List TWO examples of COC and CONC (5 marks)

(c) Explain both the traditional and modern economic models of quality of conformance (10 marks)