

CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

Autumn Examinations 2016

Module Title: Introduction to Quality Systems (CA)

Module Code: BIOT6005

School: Science

Programme Title: Bachelor of Science in Applied Biosciences
Bachelor of Science (Honours) in Herbal Science
Bachelor of Science (Honours) in Pharmaceutical Biotechnology
Bachelor of Science (Honours) in Nutrition and Health Science
Bachelor of Science in Agriculture
Bachelor of Science 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): Dr Cormac Gahan

Internal Examiner(s): Anne Ward, Dr Annmarie Burns, Dr. Caroline O'Sullivan

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

Duration: 2 hr

Sitting: Autumn 2016

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 what is meant by a quality audit (4 marks)
- (b) Write a brief overview of:
- (i) an audit plan (5 marks)
 - (ii) performance of an audit (5 marks)
- (c) List the main types of audit (5 marks)
- (d) Define each of the following:
- (i) Quality of conformance (3 marks)
 - (ii) Quality of performance (3 marks)

- Q2. (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 each of COC and CONC (5 marks)
- (c) Compare the traditional and modern economic models of quality of conformance. Draw each model in your answer and discuss the main differences between each model (10 marks)

- Q3. (a) Discuss the importance of quality circles for quality improvement under the following headings:
- (i) Quality Circle components (6 marks)
 - (ii) Operation of Quality Circles (5 marks)
 - (iii) Benefits of quality circles (5 marks)
- (b) List two other types of quality improvement team (4 marks)
- (c) Write a brief note on the different types of training in quality (5 marks)

Q4. (a) Write an account of documentation in a quality system under the following headings:

- (i) Quality manual (9 marks)
- (ii) Standard Operating Procedures (5 marks)
- (iii) Batch Manufacturing Records (5 marks)

(b) Define the following:

- (i) Quality standard (3 marks)
- (ii) Quality specification (3 marks)

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

(b) List the seven stages of product design (7 marks)

(c) What is the purpose of a design review? (6 marks)

(d) What is the role of the design department? (6 marks)

Q6. (a) Write an overview of the seven Quality Control tools used in a quality system

(14 marks)

(b) List the main stages in a typical problem solving process (5 marks)

(c) Outline the key elements of a customer complaints handling system (6 marks)