

CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

Autumn Examinations 2013

Module Title: Introduction to Quality Systems – CA

Module Code: BIOT6005

School: Science

Programme Title:

Programme Code: CR_SBIOS_7_Y2
CR_SHERB_8_Y2
CR_SPHBI_8_Y2
CR_SNHSC_8_Y2
CR_SHORT_7_Y3
CR_SAGRI_7_Y2

External Examiner(s): Prof. Torres Sweeney

Internal Examiner(s): Ms. Anne Ward

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

Duration: 2 hours

Sitting: Autumn 2013

Requirements for this examination: Scientific Calculator, Graph Paper

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? (6 marks)
- (d) Define each of the following:
- (i) Quality of conformance (2.5 marks)
 - (ii) Quality of performance (2.5 marks)
- Q2. (a) Define FOUR of the following terms:
- (i) Quality Characteristic
 - (ii) Specification
 - (iii) Quality Assurance
 - (iv) Standard
 - (v) Attribute
 - (vi) Non-conforming product (10 marks)
- (b) Give a brief outline of the content of the quality manual under the following headings:
- (i) quality policy (3 marks)
 - (ii) System Elements (5 marks)
 - (iii) Procedures Index (2 marks)
- (c) Write a brief note on:
- (i) Batch manufacturing records
- OR
- (ii) Standard Operating Procedures (5 marks)

- Q3. (a) Discuss the importance of operator control as an important motivational technique for quality improvement. (6 marks)
- (b) Define each of the following:
- (i) Craftsmanship theory (2 marks)
- (ii) Indifference theory (2 marks)
- (c) Briefly outline the operation of a quality circle. (5 marks)
- (d) What is functional analysis (5 marks)
- (e) Write a brief note on customer requirements in a quality system (5 marks)
- Q4. (a) What is benchmarking? (6 marks)
- (b) What are the benefits of benchmarking in a quality organisation (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)
- Q5. (a) Give TWO examples of each of the following:
- (i) Cost of Conformance (COC) (5 marks)
- (ii) Cost of Non-Conformance (CONC) (5 marks)
- (b) 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)
- (c) Write a brief note on the calculation of quality cost index numbers for measuring quality costs (5 marks)
- Q6. (a) Explain and show an example of each of the seven Quality Control Problem Solving Tools (20 marks)
- (b) List the main stages in a typical problem solving process (5 marks)