

Cork Institute of Technology

Bachelor of Science Applied Biosciences & Biotechnology - Award

(NFQ Level 7)

Spring 2007

Quality Management Systems

(Time: 3 Hours)

Answer a total of FIVE questions.

Answer TWO questions from Section A

Answer THREE questions from Section B

Examiners: Dr. T. Beresford

Ms. A. Murphy

Ms. A. Ward

Section A

- Q1. Discuss the economics of quality under the following headings:
- (a) Quality and profitability. (7 marks)
 - (b) Modern economic model of quality of conformance. (7 marks)
 - (c) Quality cost measurement and reporting. (6 marks)
- Q2. Write short notes on TWO of the following:
- (a) ISO9001:2000
 - (b) Quality Function Deployment
 - (c) Benchmarking
 - (d) Statistical Process control (20 marks)
- Q3. (a) Outline the general requirements for current Good Manufacturing Practice (GMP) regulations. (10 marks)
- (b) Write a brief note on the role of teamwork as a quality improvement tool in a Total Quality Management system. (10 marks)

Section B

- Q4. (a) The following is a list of specifications for computers currently available in the marketplace.

Describe in detail three of the following specifications:

(i) Intel Core Processor (2.13GHz)

(ii) 320GB Hard Drive (7200 RPM)

(iii) DVD RW

(iv) 1024MB RAM (6 marks)

- (b) Discuss the merits and drawbacks of a limited company as a trading entity. (6 marks)

- (c) Discuss in detail the relationship between supply and demand in the marketplace. Use a diagram to illustrate your answer. List the main factors that can cause a fluctuation in this relationship. (8 marks)

- Q5. (a) Discuss the function of the Operating System in a computer and outline the main classifications of operating systems available on modern computers. (6 marks)

- (b) Discuss the relationship between finance requirement and financial source. (6 marks)

- (c) Write a brief note on **two** of the following in relation to consumer protection in the marketplace.

(i) Consumer Information Act 1978.

(ii) Sale of Goods and Supply of Services Act 1980.

(iii) Office of the Director of Consumer Affairs. (8 marks)

- Q6. (a) With the aid of a diagram outline how a laboratory information management system (LIMS) manages the daily workflow of a food or pharmaceutical laboratory. Discuss the key inputs and outputs of this system. (10 marks)
- (b) Distinguish between batch production and mass production, giving examples of each. (5 marks)
- (c) List the main economies of scale in a food or pharmaceutical company. (5 marks)
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- Q7. (a) Distinguish between free trade and protectionism. Outline the role of the World Trade Organisation in free trade development. (8 marks)
- (b) Discuss the importance of an unique marketing mix for each product in a firm's product range. (6 marks)
- (c) Discuss the importance of a feasibility study in the new product development process. (6 marks)