



PIABC LEVEL 3 CERTIFICATE IN PACKAGING (QCF)

(Qualification Number: 600/0455/1)

EXAMINATION PAPER

June 2017

R/502/5925 - UNIT A

The Fundamental Principles of Packaging

Reading Time: 5 minutes

Examination Time: 2 Hours

You are required to answer and pass **ALL** the questions

Write your answers in the answer book provided

Wherever possible, use diagrams to illustrate your answer

This is a closed book examination

PIABC Level 3 Certificate in Packaging (QCF)
Unit A – The Fundamental of Principles of Packaging
June 2017

YOU ARE REQUIRED TO ANSWER **ALL** THE QUESTIONS ON THIS PAPER

Learning Outcome 1
Understand the role and functions of packaging
(25 marks)

Question 1

- A) Name and explain SIX functions of packaging. (6 x 2 marks)
- B) Name THREE mechanical or environmental hazards that can be found in a warehouse. Give an example of the effect this can have on a packaged product and show how packaging can protect against that hazard. (3 x 3 marks)
- C) Briefly describe FOUR considerations that must be taken into account when using modified atmosphere packaging (MAP). (4 x 1 marks)

Learning Outcome 2
Understand the major packaging materials and
how they are combined to form packaging components
(25 marks)

Question 2

- A) A liquid carton (such as a Tetra Pak) for a long life orange juice is constructed from a multi-layer laminate material. Identify the materials layers in this pack and explain their function. (9 marks)
- B) List EIGHT different properties of a bottle to contain a carbonated soft drink. Against each property, compare the relevant merits of glass and polyethylene terephthalate (PET) in the performance of the final product. (8 x 2 marks)

Learning Outcome 3
Understand the packaging development processes
(20 marks)

Question 3

A beverage manufacturer is planning to launch a new range of carbonated fruit drinks.

- A) Identify and explain FOUR product related factors to be considered in developing the new pack. (4 x 1 mark)
- B) Identify and explain SIX marketing related factors to be considered in developing the new pack. (6 x 1 mark)
- C) Discuss the packaging line related factors to be considered in developing the new pack. (4 x 1 marks)
- D) Identify and briefly explain the responsibilities of SIX roles/disciplines which will be involved in developing new packaging. (6 x 1 mark)

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Learning Outcome 4
Understand packaging costs and quality systems
(15 marks)

Question 4

- A) Explain each of the steps required by a packer-filler to ensure that a delivery of 100,000 empty printed plastic bottles for shampoo is suitable for use. This is the first delivery from a new supplier. (10 marks)
- B) Outline how the operation of a good quality management system can improve profitability. (5 marks)

Learning Outcome 5
Understand the relationship between packaging and the environment
(15 marks)

Question 5

Explain FIVE methods of managing packaging waste and discuss their relative advantages and disadvantages. (5 x 3 marks)