



## **PIABC LEVEL 3 CERTIFICATE IN PACKAGING**

(Qualification Number: 600/0455/1)

### **EXAMINATION PAPER**

**June 2021**

**R/502/5925 - UNIT A**

### **The Fundamental Principles of Packaging**

#### **INSTRUCTIONS TO CANDIDATES**

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.

Reading Time: 5 minutes

Examination Time: 2 Hours

**PIABC Level 3 Certificate in Packaging**  
**Unit A – The Fundamental of Principles of Packaging**  
**June 2021**

**INSTRUCTIONS TO CANDIDATES**

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 pack of cream consists of a printed plastic pot, a heat-sealed printed plastic lidding film and a clear lid. Six packed pots are then placed into a plastic tray, with a labelled shrink-wrapped cover. They are then palletised with the use of layer pads, wooden pallet, and stretch-wrap film. For this packed product:

- A) List the main functions of packaging and explain how these are each performed by the primary and secondary packaging elements in the above example. (13 marks)
- B) List SIX potential hazards in the transit of goods from the point of production to the placement of the packs on retailer's shelves. For EACH hazard listed, describe the possible problems and suggest what actions might take to reduce the probability of occurrence. (6 x 2 marks)

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

**Question 2**

Baby food with a long shelf life can be packed in glass and metal containers.

- A) Describe the TWO types of containers, closure mechanisms and how they are decorated. (2 x 3 marks)
- B) Identify the production processes involved to manufacture all the primary packaging components (2 x 3 marks) and explain the functional characteristics of the materials used which make them suitable to pack the product (2 x 3 marks).
- C) For ONE of the pack types; describe a typical secondary and tertiary packaging solution for this product. (7 marks)

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**PIABC Level 3 Certificate in Packaging**  
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**June 2021**

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

**Question 3**

- A) Using examples, identify SIX different reasons why a company might wish to change the physical packaging (as opposed to just artwork changes) of an existing product? (6 x 1 mark)
- B) Identify and discuss the SIX key steps in the process of packaging development, from concept to launch. (6 x 1½ marks)
- C) Identify FIVE departments/functions that are likely to participate in the process above and discuss their responsibilities in the development programme. (5 x 1 mark)

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

**Question 4**

- A) Identify TEN costs associated with the production of a pack of chocolate bars wrapped in a plastic flow wrap and collated in a case on a pallet and state which are fixed and variable. (10 x 1 mark)
- B) Define profit. (2 marks)
- C) How does unacceptable quality affect profit? (3 x 1 mark)

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

**Question 5**

- A) Discuss what is meant by an 'environmentally responsible' pack. (2 marks)
- B) From an environment perspective, discuss FIVE advantages (5 x 1 mark) and FIVE disadvantages (5 x 1 mark) of using glass as a packaging material for carbonated beverages.
- C) Identify THREE tools/techniques commonly used for assessing the impact of packaging on the environment. (3 x 1 mark)

**END OF EXAMINATION PAPER**