



# **PIABC LEVEL 3 CERTIFICATE IN PACKAGING**

(Qualification Number: 600/0455/1)

## **EXAMINATION PAPER**

**November 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  
November 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) Define primary, secondary and tertiary packaging. (3 x 2 marks)
- B) List the typical primary (2 marks), secondary (3 marks) and tertiary (2 marks) packaging used to contain and transport a glass jar of sauce from the food manufacturer to the retailer.
- C) Identify THREE mechanical hazards that the complete pack may experience during its journey, describing the typical causes and explain how the packaging system minimises the effects. (3 x 4 marks)

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

**Question 2**

- Aa) Provide EIGHT different examples of packaging items or components with their associated product. (8 x ½ mark)
  - b) For EACH example justify the material(s) used. (8 x 2 marks)
- B) Discuss the differences and similarities between polyethylene (PE) and polyethylene terephthalate (PET). (5 marks)

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

**Question 3**

A snack food manufacturer is developing a new pack format for a new class of breakfast bar product.

- A) Discuss what information would need to be provided within the packaging development brief. (12 x 1 mark)
- B) Identify which EIGHT roles/disciplines within the company would be involved (8 x ½ mark) and how they would contribute to this project (8 x ½ mark).

Continues on next page

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

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

**Question 4**

- Aa) Explain the difference between fixed and variable costs. (2 marks)
- b) In the manufacture of a glass bottle; identify FOUR of the most significant costs faced by the business (4 x ½ mark) and state whether they are fixed or variable (4 x ½ mark).
- Ba) What is the purpose of a packaging material specification? (3 marks)
- b) How would you decide on the acceptability of the glass bottle? (3 marks)
- c) How does unacceptable quality affect profit? (3 marks)

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

**Question 5**

- A) Identify SIX environmental factors that need to be considered when making packaging choices. (6 x 1 mark)
- B) Briefly explain how Life Cycle Assessment can assess the environmental impact of packaging throughout the supply chain. (9 marks)

**END OF EXAMINATION PAPER**