



PIABC LEVEL 3 CERTIFICATE IN PACKAGING

(Qualification Number: 600/0455/1)

EXAMINATION PAPER

November 2020

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 2020**

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) Name and explain SIX functions of packaging. (6 x 2 marks)
- B) Name THREE mechanical or environmental hazards that can be associated with warehouse and distribution operations. 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 considered 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

Single serve portions of jam (preserve) can be packed in rigid glass and semi rigid plastic containers.

- A) Considering the needs of the product:
 - a. For the two packs above, briefly describe the pack and identify how they are closed and decorated. (2 x 3 marks)
 - b. Identify and briefly describe the production processes involved to manufacture the different components of the two packs. (2 x 3 marks)
 - c. Explain the functional characteristics of all the materials used which make them suitable to pack jam (preserve). (2 x 3 marks)
- B) For ONE of the pack types; describe a typical secondary and tertiary packaging solution to collate, distribute and dispense the containers of jam (preserve) to the hotel and catering industry. (7 marks)

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PIABC Level 3 Certificate in Packaging
Unit A – The Fundamental of Principles of Packaging
November 2020

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

Question 3

- A) Using product and pack examples of your choice; briefly discuss SIX reasons why a company may need to change the packaging for an existing product. (6 x 1 mark)
- B) Outline the process of package development from concept to product launch, discussing SIX key steps in this process. (6 x 1 ½ mark)
- C) Identify FIVE departments/functions that could contribute to a packaging development team (5 x ½ mark) and briefly state their responsibilities in this process (5 x ½ mark).

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

Question 4

- A) Briefly describe the difference between fixed and variable costs. (1 mark)
- B) A diary company producing cheese would incur fixed and variable costs in the daily operations of their business.
- List FOUR examples of VARIABLE COSTS. (4 x ½ mark)
 - List FOUR examples of FIXED COSTS. (4 x ½ mark)
- C) Identify and describe FOUR factors that need to be considered in determining optimum stock holding levels. (4 x 1½ mark)
- D) What is the purpose of a specification and why is it important? (4 marks)

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

Question 5

- A) Describe THREE ways packaging can reduce product waste. (3 x 2 marks)
- B) Identify FIVE ways that manufacturers can reduce the environmental impact of packaging. (5 x 1 mark)
- C) Identify TWO tools/techniques commonly used for assessing the impact of packaging on the environment (2 x 1 mark) and briefly describe ONE of them (2 marks).

END OF EXAMINATION PAPER