



# **PIABC LEVEL 5 DIPLOMA IN PACKAGING TECHNOLOGY**

(Qualification Number: 600/0017/X)

## **EXAMINATION PAPER**

**June 2022**

**J/502/5923 UNIT 02**

**Packaging Materials and Components**

**Paper B**

### **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

This examination paper is worth 30% of the total marks for Unit 2

Reading Time: 5 minutes

Examination Time: 2 Hours

Issued under the authority of the  
**PACKAGING ASSESSMENT BOARD**  
30 April 2022

**INSTRUCTIONS TO CANDIDATES**

**You are required to answer ALL the questions on this paper**

**Learning Outcome 4**

**Understand the raw materials, properties, and applications of packaging adhesives**

**Question 1**

A) For EACH of the following adhesives:

- Starch
- Cold seal
- PVA
- Acrylic

a) Describe the characteristics of the adhesive. (4 x 2 marks)

b) Explain how these characteristics influence the application to a substrate. (4 x 2 marks)

c) Give an example of the use of the adhesive type and explain why it is suitable. (4 x 2 marks)

B) Define the following terms and describe their importance to packaging adhesives:

- Viscosity (2 marks)
- Tack (2 marks)
- Open time (2 marks)

**Learning Outcome 5**

**Understand the different types of labels and the materials used**

**Question 2**

A soft drink is packed in a glass bottle with an oval shaped label.

A) a) Discuss FIVE important properties of the paper substrate for an oval wet glue paper label. (5 x 1 mark)

b) How would these properties be assessed? (5 x 1 mark)

B) Describe the production process for an oval wet glue paper label from concept to labels ready for despatch. (10 marks)

C) Discuss the advantages and disadvantages of the following as alternative methods of decoration:

- Pressure sensitive labels (5 x 1 mark)
- Shrink sleeves (5 x 1 mark)

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Unit 2 – Packaging Materials and Components (Paper B)  
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**Learning Outcome 6  
Understand closure systems and the factors that affect seals**

**Question 3**

- A) A glass bottle can be sealed/closed in a variety of ways. Describe SIX methods of sealing a glass bottle including how the seal is achieved. (6 x 3 marks)
- B) The following standard nomenclature for container closure dimensions “HEITS” is often used to describe key dimensions on a container closure. Identify each dimension and explain its importance in achieving an effective closure system. (5 x 1 mark)
- C) Using SEVEN examples, describe how tamper evident closures systems can be achieved. (7 marks)

**END OF EXAMINATION PAPER**