



## **SUMMER EXAMINATIONS 2022**

**EXAMINATION: UNIT 2 Packaging Materials and Containers I**

**COURSE: CPD Diploma in Packaging Technology**

**DATE: 12<sup>th</sup> May 2022  
2pm to 4pm**

**EXAMINERS: David Little**

**TIME ALLOWED: 2 hours**

**INSTRUCTIONS: Please answer four questions. All questions carry equal marks**

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The use of programmable or text storing calculators, smart phones etc are expressly forbidden. Please note that where a candidate answers more than the required number of questions, the examiner will mark all questions attempted and then select the highest scoring ones.

### **Question 1 (25 marks)**

- a) Discuss the key properties of glass and how they bring benefit to the packed product.  
(10 marks)
- b) Explain FIVE different methods of reducing the energy requirements to manufacture a batch of glass.  
(5 marks)
- c) When considering sustainability, discuss whether you believe glass to be a better or a worse format for the environment, compared to, for example, a stand-up pouch.  
(10 marks)

### **Question 2 (25 marks)**

Discuss the different types and production methods of Aluminium foil. Describe the benefits it brings to certain packaging formats. Give examples to illustrate your answer.

(25 marks)

### **Question 3 (25 marks)**

- a) From a sustainability perspective, discuss the advantages and disadvantages of moving from a virgin fibre carton board pulp to a recycled pulp carton board. If you wish you may align the answer to a particular pack type or product to illustrate your answer.  
(20 marks)
- b) In the final stage of converting paper board jumbo reels, describe the two main processes (formats) involved in preparing the material for shipment.  
(5 marks)

### **Question 4 (25 marks)**

- a) Explain why a Regular Slotted Case of 125T/T B flute might not function well in a humid environment or cold chain scenario.  
(5 marks)
- b) Using four product examples of your own choice, suggest a board specification and corrugate design style to suit your chosen product. Justify the liner, fluting and style choice, based on the product you are packing.  
(20 marks)

### **Question 5 (25 marks)**

- a) List 5 different types of paperboard packaging and describe in a few words the typical type of carton board used for those packs and why.

**(10 marks)**

- b) Pick three of the following production enhancements and discuss when and how these are applied in the carton production process.

- Embossing
- Window Patching
- Metalising
- Celloglazing

**(15 marks)**