



SUMMER EXAMINATIONS 2017

EXAMINATION: UNIT 2 Packaging Materials and Containers I

COURSE: CPD Diploma in Packaging Technology

**DATE: 10th May 2017
2pm to 4pm**

EXAMINERS: Colm Munnelly, 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) Critically evaluate a printed solid board carton retail pack from any sector (this can be real or fictitious). Discuss the carton style, size, material, printing process used, number of colours and the finish. Show this carton's production stages from receipt of printing plates on the floor, through to palletization ready for dispatch. Use a rough sketch / flow diagram to illustrate these stages.

(20 marks)

- b) What scales of measurement are used to describe a paperboard product?

(5 marks)

Question 2 (25 marks)

- a) Describe the production of green glass, starting with raw materials and ending with the molten gob ready for dispense from the feeder. (Diagrams should be used where appropriate).

(17 marks)

- b) Outline SIX properties of this material

(6 marks)

- c) Explain how the colour of an amber glass bottle makes it particularly suited to the packaging of beer.

(2 marks)

Question 3 (25 marks)

- a) Describe the manufacturing process for a 3-piece can suitable for processed food. Your description should start with your chosen materials and finish with cans ready for despatch to the packer/filler. Use diagrams to illustrate your answer.

(15 marks)

- b) Describe corrosion and its results. Give THREE causes of corrosion.

(5 marks)

- c) Briefly describe FIVE methods of managing corrosion.

(5 marks)

Question 4 (25 marks)

- a) Following receipt of corrugated sheets off the corrugator, for the production of an RSC (0201) style and an 0427 style case, describe how and why the sheets differ, when looking at them, prior to production (assume both specs are the same). Then discuss the relevant production process steps, for manufacturing an RSC (0201) and also a die-cut 0427 corrugated case.

(15 Marks)

- b) Pick 5 out of 7 of the following terms and briefly explain:

- i. What is the term for planning out / fitting, the jobs on a corrugator?
- ii. How are the flutings in corrugated board formed?
- iii. What is the difference between a Kraft and Test liner?
- iv. How many paper liners would be in a triple wall case?
- v. What is the bridge used for on a corrugator?
- vi. What does B flute and B/C flute mean?
- vii. What do the terms Slit and Chop refer to?

(10 Marks, 5 X 2 marks)

Question 5 (25 marks)

- a) In paper making, there are three typical types of pulp used. Name and describe each of the three types of pulp, how they are produced and the benefits of each. Illustrate with the aid of a simple diagram the difference in the various fibres.

(15 marks)

- b) Discuss the various type of additives used in paper making furnish and describe the possible surface finishes and how they both impact on the finished paperboard and its uses.

(10 marks)