



SUMMER EXAMINATIONS 2019

EXAMINATION: **UNIT 4 Package Printing and Decorating & Packaging Machinery**

COURSE: **CPD Diploma in Packaging Technology**

DATE: **May 9th 2019**
 2pm to 4pm

EXAMINERS: **Tony Duffy, David Little, Ron Gardiner**

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) Describe how full colour printing is able to print/reproduce colour 'pictures' using just process colours.

(15 marks)

- b) Discuss how fingerprinting a Press can help control the print results, then explain Dot Gain and how it can impact on a printed design.

(10 marks)

Question 2 (25 marks)

- a) What are the three fundamental design messages used to sell a branded packaged product.

(10 Marks)

- b) Briefly explain five (5) of following terms:

- Demographics
- Psychographics
- ABC1
- Brand Equity
- Typography
- Brand Management

(5 X 3 marks)

Question 3 (25 marks)

- a) Discuss why achieving an accurate fill quantity, and reducing the variability in fill quantity is important.

(3 marks)

- b) Discuss the advantages and disadvantages of level and volume filling of liquids

(4 marks)

- c) Describe and justify an appropriate method for placing the correct amount of material to fill into a pack for each of the following products. Use a different system for each product

- Carbonated soft drink filled into glass bottle
- Individual frozen prawns into bag
- Talc powder into a container

(3 x 6 marks)

Question 4 (25 marks)

- a) Describe the operation of thermoform fill machines used to modify atmosphere packs for cooked ham.

(8 marks)

- b) Describe four methods of adding variable data to packs and discuss where each can be used.

(8 marks)

- c) Discuss the factors which contribute to this line's overall equipment effectiveness and how it could be improved. Provide an example of each.

(3 x 3 marks)

Question 5 (25 marks)

- d) Describe the packaging line for filling beer into glass bottles at 20,000 bottle per hour from delivery of components to dispatch of product to a major retailer, including any off-line operations

(25 marks)