PIABC LEVEL 3 CERTIFICATE IN PACKAGING

(Qualification Number: 610/0741/9)

SAMPLE EXAMINATION PAPER

Candidate Number	

INSTRUCTIONS

- Please ensure you have written your candidate number in the box above.
- Your name must NOT appear anywhere on this examination paper.
- This is a closed book examination.
- Write your answers in this examination paper.
- Answer all questions.
- You do not lose marks for incorrect answers.
- If you need extra space for your answer(s), please use the spare page at the end of this examination paper. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.
- Leave time at the end to check your answers**.**
- You are not allowed to take this examination paper out of the examination room.

INFORMATION

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.

Suggested Time: 95 minutes

Unit A – Role and Functions of Packaging
(13 Marks)

1. Using examples, provide a definition for tertiary packaging. (2 marks)

2. Identify TWO stages in the packaging supply chain. (2 x ½ mark)

1.	
2.	

3. Excluding inform and contain, name the other FOUR functions of packaging. (4 x ½ mark)

1.	
2.	
3.	
4.	

4. Using examples, briefly explain how primary packaging performs the inform function of packaging. (2 marks)

5. Using mayonnaise packed in a labelled glass jar, collated in trays and palletised, then shipped from the manufacturer to the retailer.

   Identify TWO mechanical hazards that the complete pack may experience during its journey, describing the typical causes and briefly explain how the packaging system minimises the effects. (2 x 3 marks)

1.	
2.	

END OF UNIT A

Unit B – Packaging Development Process
(12 Marks)

6. Identify THREE reasons why a company may change a product's packaging. (3 x ½ mark)

1.	
2.	
3.	

7. One of the six steps in the packaging development process is developing the packaging brief. When developing a pack for a new product, describe what information about the market is needed to prepare the brief? (4 marks)

8. Apart from developing the packaging brief, name the other common steps in the packaging development process. (5 x ½ mark)

1.	
2.	
3.	
4.	
5.	

9. Discuss how development costs and lead times might affect decisions when altering packaging. (4 marks)

END OF UNIT B

Unit C – Packaging Sustainability
(11 Marks)

10. Briefly describe environmentally responsible packaging. (2 marks)

11. Explain TWO ways customer expectations can influence sustainable packaging development. (2 x 1 mark)

1.	
2.	

12. What are the SEVEN steps in the hierarchy of waste management? (7 x ½ mark)

1.	
2.	
3.	
4.	
5.	
6.	
7.	

13. Identify ONE technique that can be used to assess the impact of packaging on the environment. (½ mark)

14. Discuss how environmental assessment tools can support decision-making in packaging design. (3 marks)

END OF UNIT C

Unit D – Packaging Materials and Formats
(27 Marks)

15. Glass is made up from FOUR abundant natural resources. List these FOUR materials. (4 x ½ mark)

1.	
2.	
3.	
4.	

16. Briefly describe the THREE common forming processes to make glass containers. Justify the use of each process for the different container types. (3 x 2 marks)

1.	
2.	
3.	

17. What is the temperature of a typical glass furnace? (½ mark)

18. Identify FOUR types of metal closures and explain where they are used. (4 x 1 mark)

1.	
2.	
3.	
4.	

19. What is the alloy of iron and carbon? (½ mark)

20. A two-piece draw and wall iron (DWI) container can be used for what type of packaging? (½ mark)

21. What does the acronym FBB stand for, describe how it is constructed and what it is used for? (2 marks)

22. Explain the dead fold behaviour and stiffness properties of paper and paperboard and why they are important. (2 x 1 mark)

23. A layer of fluted paper sandwiched between two layers of flat paper. This is a description of what type of packaging material? (½ mark)

24. What does the acronym PET stand for? (½ mark)

25. For the following types of plastic packaging. Name ONE common use for each. (3 x ½ mark)

PVC	
HDPE	
LDPE	

26. Describe, with the use of an annotated diagram, the cast extrusion process for bi-orientated polypropylene film manufacture. (5 marks)

27. Flexible or laminate packaging is usually made up from a number of layers of materials which are stuck or bonded together.

Name TWO of the methods for bonding the layers together. (2 x ½ mark)

1.	
2.	

28. When choosing the 'best' material for packaging, which important properties do you need to consider and why? (1 mark)

END OF UNIT D

Unit E – Printing and Decoration Processes
(10 Marks)

29. In theory, all possible colours can be made up combining CMYK. What does the abbreviation CMYK the stand for? (4 x ½ mark)

C	
M	
Y	
K	

30. List the FIVE main stages in the artwork and reprographic process. (5 x ½ mark)

1.	
2.	
3.	
4.	
5.	

31. What is the name of the printing process which uses a relief plate for printing crisp packets? (½ mark)

32. Describe, with the aid of an annotated diagram, how the rotogravure process works. (5 marks)

END OF UNIT E

Unit F – Packing Line Operations
(7 Marks)

33. List TEN common packing line operations to pack jam into a glass jar from receipt of packaging items to despatch of product to customer. (10 x ½ mark)

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

34. What does the acronym VFFS stand for? (½ mark)

35. Identify THREE different ways a pack can be labelled. (3 x ½ mark)

1.	
2.	
3.	

END OF UNIT F

Please use the following page if you need more space for answering any question.

Question number	Your answer

END OF EXAMINATION PAPER