

**UNIVERSITI TUN HUSSEIN ONN MALAYSIA****FINAL EXAMINATION
SEMESTER II
SESSION 2016/2017**

COURSE NAME : PRINCIPLES OF PACKAGING
COURSE CODE : BNK20103
PROGRAMME CODE : 2 BNK
EXAMINATION DATE : JUNE 2017
DURATION : 3 HOURS
INSTRUCTION : ANSWERS ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF FIVE (5) PAGES

- Q1** (a) List down the **FIVE (5)** types of packaging materials. (5 marks)
- (b) Discuss **THREE (3)** main functions of packaging. (6 marks)
- (c) **Figure Q1(c)** shows the integrated system of packaging and their relationship. Analyze how the elements involve in packaging role to achieve the packaging functions. (9 marks)
- Q2** (a) **Figure Q2(a)** shows the lowest possible cost graph, the lose by damage(%) towards cost of packaging. Discover how the total packaging system cost can be reduced through the following elements:
(i) the development cost
(ii) the package cost
(iii) the packaging cost, and
(iv) the distribution cost (10 marks)
- (b) **Figure Q2(b)** shows the Damage Boundary Curve (DBC), of shock fragility assessment test, acceleration, g versus velocity chance, m/sec. Propose a detail interpretation on the develop curve. (10 marks)
- Q3** (a) Differentiate between food packaging and pharmaceutical packaging. (2 marks)
- (b) Categorize **FIVE (5)** basic categories of distribution depending on the packaging function and product requirements. (5 marks)
- (c) Choose **THREE (3)** types of physical distributions in system packaging. (3 marks)
- (d) Propose the purpose of using cushion on packaging system and describe **TWO (2)** characteristics of cushion material. (10 marks)

- Q4** (a) Outline **FIVE (5)** the factors affecting of product quality and “shelf life”.
(5 marks)
- (b) Categorise **SIX(6)** the quality assurance of Modified Atmosphere Packaging (MAP).
(6 marks)
- (c) Apply the concept of “shelf life” and its application in food industry.
(9 marks)
- Q5** (a) Compare extensively between the physical and chemical properties how to protect the product sensitivity during distribution.
(10 marks)
- (b) **Figure Q5(b)** shows a marketing strategy model. Using principle 4’s, analyze the model how the marketing strategy and application of packaging can increase the customer satisfaction
(10 marks)

- END OF QUESTIONS -

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FINAL EXAMINATION

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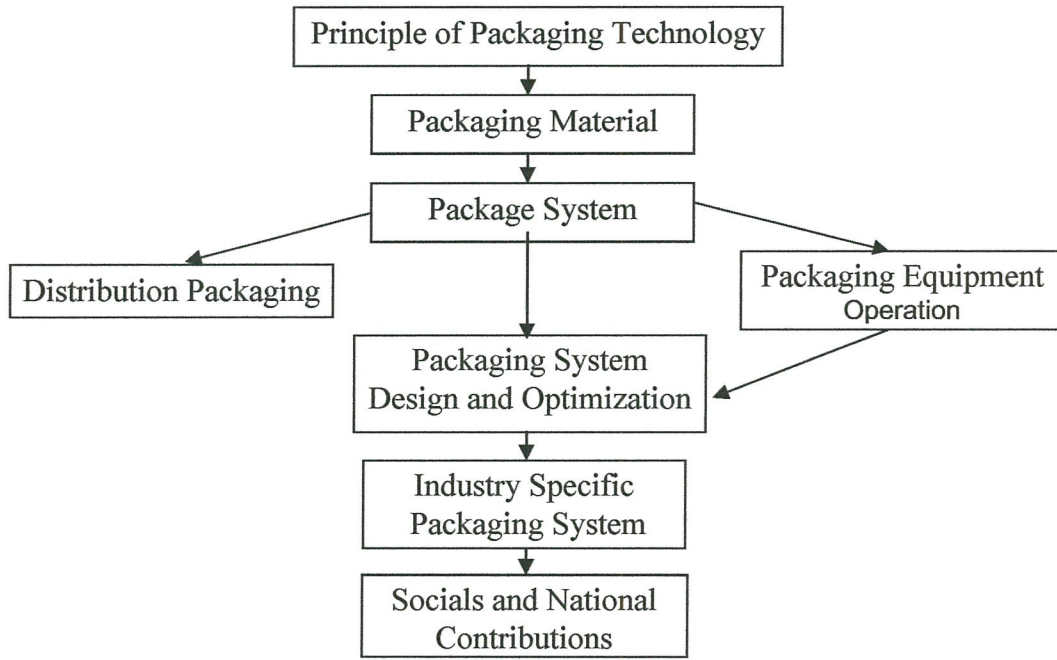


Figure Q1(c)

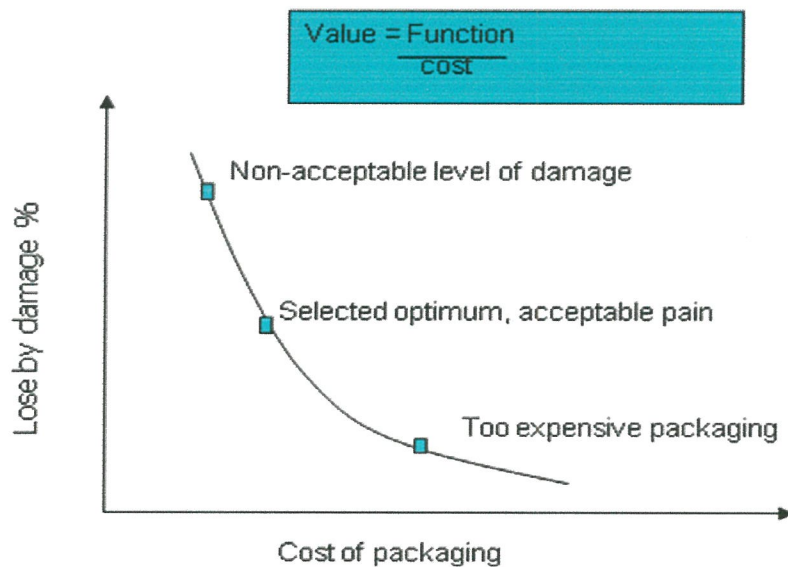


Figure Q2(a)

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DAMAGE BOUNDARY

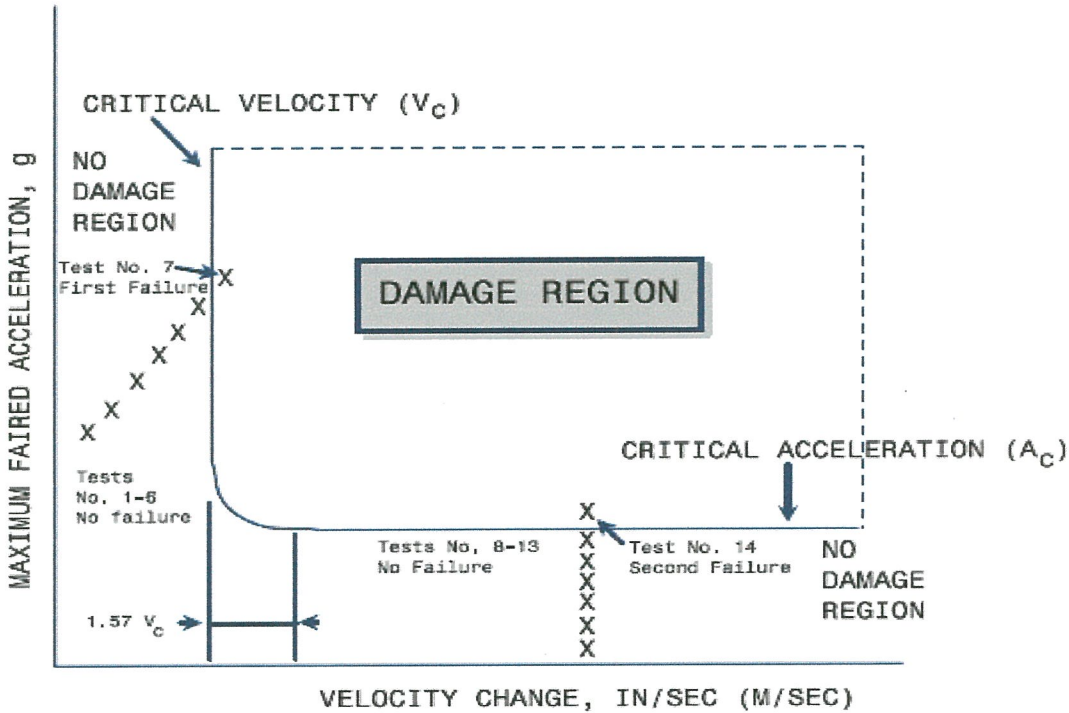


Figure Q2(b)

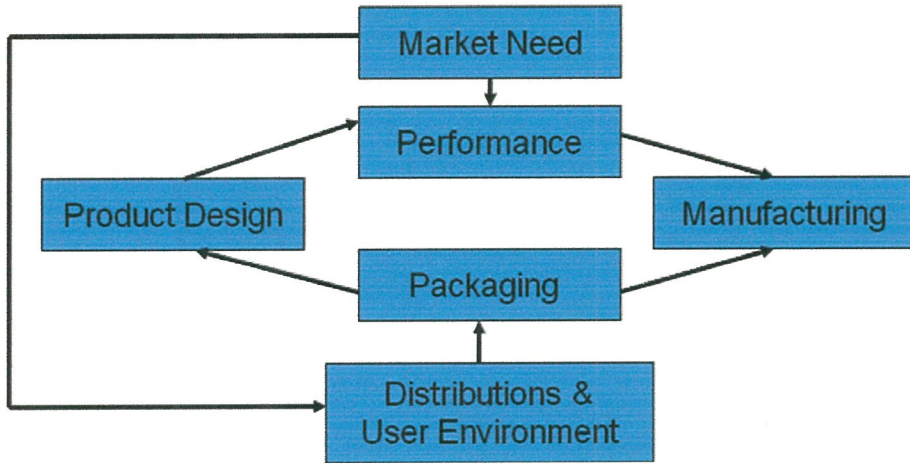


Figure Q5(b)