

The Open University of Sri Lanka
 Department of Textile and Apparel Technology
 Post-Graduate Diploma in Technology / Master of Technology
 Final Examination - 2012/2013
 TTX7139 - Product Development
 Duration- 3 Hours



Date: 01st August 2013

Time: 0930 - 1230 Hours

Total number of questions = 07

Number of questions to be answered = 05

Marks for each question are indicated at the end of the question.

- Q1 (a)** According to BS7000, product development process is divided into four phases. Briefly explain the activities that are involved in each of these phases in relation to the apparel product development. (8 marks)
- (b)** State the main goal of "Strategic design" and briefly explain what directions you should follow to achieve this goal. (8 marks)
- (c)** During designing a product, designer can be inspired by different ways. With the help of suitable examples, explain two (02) such ways. You may use the examples to describe how they could inspire the designer. (4 marks)
- Q2. (a)** Consumer buying behavioral study is very important in consumer analysis. Such a study is focused mainly on three factors, which influence consumer buying behavior. Briefly explain those factors with providing suitable examples. (6 marks)
- (b)** What do you understand by "Competitor analysis" and why is it important in product development? (4 marks)
- (c)** Illustrate and briefly explain the different levels of competition considering Sri Lankan market for men's shirt. (10 marks)

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- Q3.(a)** What is “Law of demand” and explain the behavior of the demand curve. (6 marks)
- (b)** Product marketing can be done through market segmentation. Briefly explain four (04) bases on which the market can be segmented. Give suitable examples for each base. (8 marks)
- (c)** Fashion designing is done based on five main principles. Briefly explain the influence of any three (03) of them on fashion designing providing suitable examples. (6 marks)
- Q4. (a)** Explain in brief the following elements of the production costs? (6 marks)
- (i) Fixed costs (ii) Variable costs (iii) Overhead costs
- (b)** A garment retailer has fixed costs amounting to Rs. 400,000/= per annum and he has to pay Rs. 100,000/= for his sales assistants per month as fixed salaries. He purchases 10,000 items of stock at Rs. 200.00 (excluding VAT) a piece.
- (i) Calculate the minimum price (excluding VAT) that must be charged by the retailer to cover the costs, assuming that he sells all the garments within a month. (04 marks)
- (ii) If the retailer decides to charge Rs. 290.00 (including 12% of VAT) per item, what is the number of garments he should sell to break-even? (04 marks)
- (iii) If he sells the entire stock of 10,000 garments, at Rs. 290.00 (including 12% of VAT) how much profit would he make? (03 marks)
- (iv) If the variable cost per garment increases by 25%, what is the break-even point in sale price. (03 marks)
- Q5.(a)** Product costing is done in several stages. What are they and briefly explain why they are essential to decide the final cost of the product? (4 marks)
- (b)** Distinguish between two costing methods such as “Direct costing” and “Absorption costing”. (4 marks)
- (c)** An apparel manufacturing company decided to set the price of a garment using cost based pricing method. Following table give you the required information.

Manufacturer's mark-up is 25% from the cost of production and Retailer's mark-up is 65% from manufacturer's selling price. Calculate the retail price including VAT, which is 12%.

Item	Details	Quantity	Unit cost (Rs.)
Fabric	Jersey	1.5m	50.00
Trim	Polyfil thread	1package	5.00
	Metal zip	1	6.00
	Knitted collar	1	10.00
Label	With logo and care conditions	1	12.00
Labour to cut, make and trim cost			7.50

(12 marks)

- Q6. (a)** What do you understand by the term "Brand management" and briefly explain its importance for marketing a product. (4 marks)
- (b)** Briefly explain the importance of "Brand equity" for the apparel product marketing and describe three (03) factors of importance for establishing brand position. (10 marks)
- (c)** Briefly explain three (03) areas of importance for eco-fashion clothing manufacturing. (06 marks)
- Q7. (a)** Explain different types of wastes identified in the lean manufacturing, and state how would these wastes influence the productivity of a garment factory. (12 marks)
- (b)** Briefly explain the advantages of using "Just in Time (JIT)" principles in the apparel production business. (4 marks)
- (c)** Briefly explain why "Quick Response (QR)" is important to reduce the lead time of a manufacturing process. (4 marks)