

The Open University of Sri Lanka  
Department of Textile and Apparel Technology  
Post-Graduate Diploma in Technology /  
Master of Technology  
Final Examination - 2011/2012  
TTX7139 - Product Development  
Duration - 3 Hours



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Date: 01<sup>st</sup> March 2012

Time: 0930 - 1230Hours

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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)** Develop a product development model for a new apparel design. Explain the similarities and dissimilarities between your proposed model and the model given in BS 7000. (40 marks)
- (b) (i)** What do you mean by "Strategic design" for any company? Explain how it is used in a company? (20 marks)
- (ii)** How do you evaluate the strategic position of your company with reference to apparel business? (20 marks)
- (c)** Why fashion forecasting is of vital importance for the success of an apparel business? (20 marks)
- Q2. (a)** Competitor analysis is done when a product in the market has reached the maturity level. Briefly explain how you would identify your competitors. (20 marks)

- (b) Briefly explain various levels of competition for a diet cola drink available in the beverage market. (20 marks)
- (c) Briefly explain how the following market demand concepts affect the buying behavior of a consumer for a particular product?
- (i) Effective demand (ii) Latent demand (20 marks)
- (d) Differentiate the two marketing strategies: "Niche marketing" and "Mass marketing". (10 marks)
- (e) Briefly explain the relationship between manufacturer's and consumers' technological knowledge using a suitable diagram and their effect on the price of the product in market. (30 marks)
- Q3. (a) Fabric and colour are two main ingredients in fashion designing. Briefly explain the factors that you would consider in the selection of suitable fabrics and colours for a new apparel design. (30 marks)
- (b) "Fashion designer can change the image of natural silhouette of a human body using different techniques". Justify this statement with suitable examples. (30 marks)
- (c) During the planning of the product range (product mix), based on what factors are the garments categorized? Explain them. (40 marks)
- Q4. (a) "Total cost of the production and total revenue vary with the production quantity and the price of the product". Briefly explain this statement using a suitable diagram. On the diagram, mark the position where profit is maximum. (30 marks)

- (b) An apparel retailing company sells a blouse for Rs. 450/=. The company has a variable cost of Rs.150/= per blouse and fixed cost of Rs. 350,000/=. The estimated sale per season is 2500 blouses.
- (i) How many blouses must the manufacturer sell to break-even? (20 marks)
- (ii) How much profit would the company make at the end of the season, from one blouse, if the VAT is 12%? (20 marks)
- (iii) What is the net income, if the sales drop by 30% in the next year? (15 marks)
- (iv) What is the break even point of sales in rupees, if the variable cost per blouse increases by 15% in the next year? (15 marks)
- Q5. (a) In any apparel manufacturing company, pre costing and post costing are done. Why these two costing procedures are important? (20 marks)
- (b) Briefly explain the factors that influence pricing of an apparel product. (40 marks)
- (c) There are eight stages to go through in the process of pricing any product. Briefly describe each of them and explain why each of these stages are important to decide a price of a particular product? (40 marks)
- Q6. (a) Briefly explain why branding is important in capturing the consumer market? What are the stages required to build a strong product brand in the market? (30 marks)

- (b) Briefly explain the necessity of practicing green fashion in the local environment. (30 marks)
- (c) Briefly explain any four (04) ethical practices adopted by the Sri Lankan apparel industry under the "Garments without guilt" initiative. (40 marks)
- Q7. (a) What is the goal of "lean manufacturing" and briefly explain how the lean manufacturing concept would help the growth of any production / service organization. (30 marks)
- (b) What are the principles of quick response manufacturing (QRM) and how QRM will be appropriate for the modern day product development processes. (30 marks)
- (c) Differentiate QRM and lean manufacturing by considering any four (04) aspects. (40 marks)