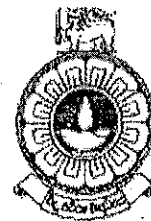


THE OPEN UNIVERSITY OF SRI LANKA
 DEPARTMENT OF TEXTILE AND APPAREL TECHNOLOGY
 POST GRADUATE DIPLOMA IN TECHNOLOGY
 (APPAREL PRODUCTION AND MANAGEMENT)



FINAL EXAMINATION – 2016/2017
 TTX7139- PRODUCT DEVELOPMENT
 DURATION: THREE HOURS

Date: 19th November 2017

Time: 1330-1630 Hours

Total number of questions = 08

Answer only five (05) questions.

Mark for each question is indicated at the end of the question.

- Q1. (a) A product development model for a new product design is given in BS7000. Draw a chart to show the four (04) phases of this model and briefly describe the activities involved in each of these phases relevant to designing an apparel product. (40 marks)
- (b) Briefly describe how a good strategic plan helps growth in a business. You may consider the contents of a strategic plan and their contribution to the development of the organization, while answering this question. (30 marks)
- (c) How does a design-driver help to design a new product? Briefly explain three (03) methods that you would use to find novel ideas to build a good design driver. (30 marks)
- Q2. (a) Consumer buying behaviour model contains several stages. With the help of a model diagram briefly explain these stages. (30 marks)
- (b) (i) Why competitor analysis is important for good product design and development process? (20 marks)
- (ii) Write a short note on the three (03) steps involved in competitor analysis. (30 marks)

(c) Briefly explain various levels of competition for a shoe product available in the market. (20 marks)

Q3. (a) Briefly explain why it is important to do market research in product design and development process. You may consider the activities done in a market research to answer this question. (20 marks)

(b) Briefly explain how the following market demand concepts affect the buying behaviour of a consumer for an apparel product?

(i) Effective demand (ii) Latent demand (20 marks)

(c) (i) Draw a demand curve and explain how it affects consumer buying. (30 marks)

(ii) Marketing has two approaches such as mass marketing and market segmentation. Briefly explain the two and describe the advantages and disadvantages of each them. (30 marks)

Q4. (a) Fabric and colour are two main ingredients in fashion designing. Using suitable examples, briefly explain how you would select suitable fabrics and colours for different garment designs for various people and various situations where these garments would be used. (30 marks)

(b) With the help of suitable examples, explain how a designer can use optical illusion techniques to manipulate the body figure. (30 marks)

(c) By drawing suitable diagrams, explain the product mix concept and describe how you can do range planning for men's shirts. You may give suitable examples for these diagrams. (40 marks)

Q5. (a) Briefly explain the following two tools and their applications as used in product costing.

(i) Target costing (ii) Marginal analysis (30 marks)

(b) An apparel retailing company sells a blouse for listed price as Rs. 600/= (assume VAT=12% and NBT 2.5%). The company has a fixed cost of Rs. 350,000/= and a variable cost of Rs.150/= per blouse. The estimated sale per season is 1500 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? Assume the company was able to sell the estimated number of blouses (1,500) during the season. (20 marks)

(iii) What is the net income, if the sales drop by 20% 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 10% in the next year? (15 marks)

Q6. (a) Briefly explain elasticity of demand curve using a suitable diagram and describe why some of the products may have inelasticity of demand. (30 marks)

(b) Briefly describe any three (03) factors influencing on deciding a price for a product with giving suitable examples. (30 marks)

(c) If a variable cost of a pair of hand glause is Rs. 10 and fixed cost is Rs. 400,000. It is expected to sell 20, 000 pairs in this moth. If the retailer desires either

(i) a mark-up of 20% on the price of the product

(ii) to obtain a return of 25% on this business,

Determine the selling price for each of above cases. (40 marks)

Q7. (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? (40 marks)

(b) Briefly explain the importance of brand equity and brand positioning to a business. (20 marks)

(c) By giving suitable examples, briefly explain how today's textile and apparel manufacturers practice eco-friendly /green fashion concept. (40 marks)

Q8. (a) What is the goal of “lean manufacturing” and briefly explain how the lean manufacturing concept is important to practice to a growth of any production / service (30 marks)

(b) (i) Why Just In Time concept is important for a business? You may consider its key elements. (20 marks)

(ii) In product manufacturing pull system and push system are used. Differentiate these two and briefly explain why pull system gives more advantages than the push system. (20 marks)

(c) Explain the importance of applying quick response to a production industry and the benefits that can be gained by a production organisation. (30 marks)