

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Textile & Apparel Technology



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| Study Programme | : Postgraduate Diploma in Technology |
| Name of the Examination | : Final Examination |
| Course Code and Title | : TTX7139 Product Development |
| Academic Year | : 2017/18 |
| Date | : 17 th February 2019 |
| Time | : 1330-1630hrs |
| Duration | : 3 hours |

General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **Seven (7)** questions in **four (4)** pages.
3. Answer any **Five (5)** questions only. All questions carry equal marks.
4. Answer for each question should commence from a new page.
5. This is a Closed Book Test (CBT).
6. Answers should be in clear hand writing.
7. Do not use Red colour pen.

- Q1.** (a) A product development model for a new product design is given in BS7000. Briefly explain how does the fashion industry fit for this model. You may consider the tasks involved in developing a fashion product. (40 marks)
- (b) Product planning is the first phase of a product development process. It has two main phases. Give these two phases and briefly describe the activities involved in each of these phases. (30 marks)
- (c) In design and develop a fashion product, fashion designer can be inspired by many factors. Selecting any three (03) of them and briefly explain how fashion designer can be inspired by each of them.. (30 marks)
- Q2.** (a) Consumer decision making process has several stages. Briefly explain how a consumer take a decision to purchase any product through these stages using an example. (30 marks)
- (b) Briefly explain how the following psychological factors effect on consumer decision on purchasing a good.
- (i) Perception (ii) Consumer learning (iii) Motivation (30 marks)
- (c) (i) Differentiate consumer analysis with competitor analysis. (10 marks)
- (ii) Briefly explain the activities involved in the three (03) stages of doing a competitor analysis. (30 marks)
- Q3.** (a) What do you understand by market research and briefly explain of carrying out a market research in product development activities, with referring the activities involved in a market research. (20 marks)
- (b) Differentiate the concepts “Effective demand” and “Latent demand” (20 marks)
- (c) (i) Using the demand curve, briefly explain the concept “Law of demand” for a good. (20 marks)
- (ii) Briefly explain any four (04) factors cause to increase or decrease demand. (40 marks)
- Q4.** (a) In develop a fashion design, what are the four (04) types of normal body shapes and explain them using suitable diagrams. (20 marks)
- (b) What do you understand by “Optical illusion” and explain how you can manipulate a human body shape using the optical illusion principles with using suitable diagrams for the selected optical illusion principles. (50 marks)

- (c) State any three (03) fabric properties and characteristics, which effect the performance of a fabric used for apparels and briefly explain how each of them influence on the fabric performance. (30 marks)

Q5. (a) Differentiate the Elasticity of demand and Inelasticity of demand and briefly explain how do they effect on the selling of a product in the market. (20 marks)

(b) An apparel retailing company sells a blouse for listed price as Rs. 1000/= (assume VAT=15% and NBT 2.5%). The company has a fixed cost of Rs. 400,000/= and a variable cost of Rs.250/= per blouse. Company pays Rs. 420,000.00 for his sales assistant per annum as fixed salaries. 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? (20 marks)

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

(iv) What is the break even point of sales in rupees, if the variable cost per blouse increases by 20% in the next year? (10 marks)

Q6. (a) 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 30, 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 30% on this business,

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

(b) (i) Give the reasons for following statement.

“Branding is just not marketing” (15 marks)

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

(c) (i) What is meant by “Green fashion”? (5 marks)

(ii) By giving suitable examples, briefly explain how eco-friendly /green fashion concept used by today’s textile and apparel manufacturers. (20 marks)

Q7. (a) Briefly explain how the lean manufacturing concept is important to practice for growth of Sri Lankan apparel industry. You may refer the main goals of lean manufacturing. (30 marks)

(b) (i) With considering the key elements of Just in Time (JIT) technique, briefly explain why it is important to grow up a business. (20 marks)

- (ii). Differentiate the Pull system and Push system used in manufacturing industry and briefly explain why pull system gives more advantages than the push system. (20 marks)
- (c) Explain what is Quick response manufacturing (QRM) and importance of applying in manufacturing industry. State the benefits that can be gained using QRM by a production organisation. (30 marks)