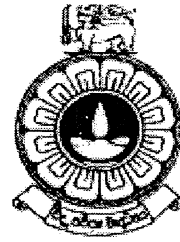


THE OPEN UNIVERSITY OF SRI LANKA
BACHELOR OF INDUSTRIAL STUDIES /
BACHELOR OF TECHNOLOGY
FINAL EXAMINATION 2013 / 2014
TTX5237 – SPECIALITY FABRIC
DURATION - THREE HOURS



DATE: 29th August 2014

TIME: 0930 - 1230HOURS

Total Number of Questions = 08 Number of questions to be answered = 06

Answer the question 1, which is compulsory, and five (05) additional questions.

Question 1 carries twenty five (25) marks and questions 2 to 08 carry fifteen (15) marks each.

1. Compulsory Question

- a) Briefly explain four functions of clothing (02 Marks)
- b) Explain four physical properties/ characteristics those affect the durability of clothing materials (02 Marks)
- c) Name one similarity and one difference between “Denim” and “Drill” fabrics. (02 Marks)
- d) Briefly describe the inherent properties of Indigo Dye (02 Marks)
- e) Briefly explain the reasons for suitability of projectile looms to weave heavy and lightweight denim fabrics. (02 Marks)
- f) The basic meaning of the concept “stretch” includes a combination of three factors. What these three factors? (03 Marks)
- g) Compare the 3 pick and 4 pick terry with respect to pile fastness (03 Marks)

- h) Old wash is a garment washing method, briefly explain it. (02 Marks)
- i) Explain the differences between Plated and Fleecy knitted fabric (02 Marks)
- j) What is the difference between Velvet and Velour (03 Marks)
- J) Briefly explain what you understand by Hydro entangled web consolidation. (02 Marks)

Select 5 questions from the following questions

- 2) a) Briefly explain at least three different industrial methods of continuous dyeing used in production of denim (06 Marks)
- b) Explain the main purpose of sizing of warp yarn and the importance of optimum size take-up. (03 Marks)
- c) Define the terms "residual moisture content", "residual elongation" and "size pick-up" pertaining to sizing of indigo dyed warps. (06 Marks)
- 3) a) Explain the reasons and how following two stages of denim finishing process are carried. (08 Marks)
- i. Preskewing
- ii. Preshrinking
- b) Briefly explain the basic differences of following methods employed in continuous dyeing. (07 Marks)
- i. Sheet dyeing or slasher dyeing
- ii. Double sheet dyeing
- iii. Long chain or rope dyeing

- 4) a) Briefly explain the different delayed beat-up mechanisms used in terry weaving. (09 Marks)
- b) Briefly explain the negative and positive easing motions used in Leno weave. (06 Marks)
- 5) a) Briefly explain Axminster carpet in general and at least two type of Axminsters. (08 Marks)
- b) Briefly explain what is meant by Wilton carpet. (07 Marks)
- 6) a) Briefly explain the method of producing needle punch non pile fabrics. (07 Marks)
- b) Explain the production of net structures using warp knitting technology. (08 Marks)
- 7) a) What you understand by multi-axial lay system in warp knitting (06 Marks)
- b) Explain the used of double needle bar warp knitting machine used to produce technical textile. (05 Marks)
- c) Explain two types of fabric produced using double needle bar warp knitting machine (04 Marks)
- 8) a) Explain the difference between 3 pick and 4 pick terry using notation. (08 Marks)
- b) Briefly explain the production methods of lace and curtain fabrics. (07 Marks)