



THE OPEN UNIVERSITY OF SRI LANKA

BACHELOR OF INDUSTRIAL STUDIES

023

FINAL EXAMINATION – 2006 / 2007

TTI5146 INDUSTRIAL GARMENT WASHING AND FINISHING

DURATION - THREE HOURS

DATE: 26 March 2007

TIME: 09.30 – 12.30 HOURS

Total Number of Questions = 08

Number of questions to be answered = 06

Answer 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.

01 Compulsory question

- (a) There are different objectives of “Garment washing and finishing”. State five different finishing or washing treatments which can be considered as fashion needs. (02 Marks)
- (b) Distinguish between “Soil Removal” and “Stain Removal” (02 Marks)
- (c) Washing and finishing processes can mainly be categorized into wet and dry processes. In the case of wet processes, the conditions have to be controlled very accurately. State the most important conditions/parameters according to which individual wet processes are distinguished. (02 Marks)
- (d) What is the purpose of “Softening” of garments as a final finishing process? (02 Marks)
- (e) Distinguish between “A floor model single colour screen printer” and “A multi-colour carousel type screen printer”. (02 Marks)
- (f) What are the two essential features that have to be kept in mind, prior to any stain removal procedure? (01 Mark)
- (g) What is the function of “Auxochromes” available in dye molecules? (02 Marks)
- (h) What is a “Hydrogen Bond”? (01 Mark)
- (i) Basic Dyes are presently used only for Acrylics; explain why? (02 Marks)
- (j) What is “Micelle Formation” as applied to detergents? (02 Marks)
- (k) What do you understand by “Colour Fastness to Crocking”? (01 Marks)
- (l) Distinguish between “Crease Recovery” and “Scrunch” finishes. (02 Marks)

- (m) What is "Bio-polishing"? (02 Marks)
- (n) What is "Monkey Wash"? (02 Marks)
02. Abrasion is one basic procedure employed in different garment washing and finishing processes.
- Explain what effects are produced on garments by abrasion. (03 Marks)
 - State the different methods of abrasion used by the garment washing and finishing industry. (04 Marks)
 - Explain one method of physical abrasion carried out under wet condition. (08 Marks)
03. a) Distinguish between "Brushing" and "Sand Blasting". (04 Marks)
- b) Write an essay on "Brushing and Brushing Machines" explaining different types of brushing machines available and equipment required. (11 Marks)
04. State and describe all the stages of solid and liquid soil removal from fabrics. (15 Marks)
05. a) Explain in brief why dyes and pigments are coloured? (07 Marks)
- b) Elaborate the terms "Substantivity" and "Affinity". (08 Marks)
06. a) What is a "Sulphur Dye"? (04 Marks)
- b) What is the similarity between Vat dyes and Sulphur Dyes? (04 Marks)
- c) Discuss wash and light fastness properties of sulphur dyes comparing with Vat Dyes (07 Marks)
07. a) What are Enzymes? (05 Marks)
- b) Explain the method of "Enzyme Washing" giving most suitable temperature and pH ranges for Acid Cellulase and Neutral Cellulase. (10 Marks)
08. Write short Notes on:
- Abrasion effects with Laccase (03 Marks)
 - Buffers (03 Marks)
 - Heavy Destroy Wash (03 Marks)
 - Pigment colours (03 Marks)
 - Reactive dyes (03 Marks)