



THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF TEXTILE & APPAREL TECHNOLOGY
BACHELOR OF TECHNOLOGY HONOURS IN ENGINEERING/ BACHELOR OF
INDUSTRIAL STUDIES HONOURS
FINAL EXAMINATION 2016
TTX 3234 – TEXTILE PREPARATION
DURATION - 3 HOURS

Date: 8th December, 2016

Time: 930 - 1230 Hrs

Total number of questions in this paper is nine (09). Total number of questions to be answered is six (06). Question number one is compulsory and carries 25 marks. All other questions carry (15) marks each.

- 1)
 - a. List three impurities found on cotton.
 - b. What do you understand by “mercerization”?
 - c. Why desizing is required for grey fabric for further processing?
 - d. Give a brief account on sizing agents.
 - e. Give the reasons that enzyme desizing is better than chemical desizing.
 - f. Name three electrolytic detergents.
 - g. Explain the term “degumming”.
 - h. What is an “levelling agent”?
 - i. Why carbonization is important for wool?
 - j. Name the bleaching agent that can be used for protein fibres as well as for cellulose fibres.

- 2) (i) What are the added impurities of wool? (04 Marks)
(ii) What do you understand by the term “scouring”? (04 Marks)
(iii) Briefly describe the methods available for scouring. (07 Marks)

- 3) (i) Give examples for machines used for chemical cleaning process. (05 Marks)
(ii) Using clear diagrams explain the process of kier boiling. (10 Marks)

- 4) (i) Briefly describe the mercerization process. (07 Marks)
(ii) List the qualities acquired by a mercerized cloth. (08 Marks)

- 5) With the aid of clear diagram explain why counter current system is more effective than other washing systems. (15 Marks)
- 6) Write short notes on the following:
- a. Colloidal wash (05 Marks)
 - b. Pigment wash (05 Marks)
 - c. Micelle (05 Marks)
- 7) (i) What is an “optical brightening agent”? (05 Marks)
- (ii) Explain the action of optical brightening agents on textile substrates. (10 Marks)
- 8) (i) What do you understand by the term bleaching? (05 Marks)
- (ii) List out 03 bleaching agents used for bleaching of textiles and give examples of fibre types for which those bleaching agents can be used. (10 Marks)
- 9) Compare the processes of peroxide bleaching with sodium chlorite bleaching pointing out the advantages in each process. (15 Marks)