

THE OPEN UNIVERSITY OF SRI LANKA

BACHELOR OF TECHNOLOGY/ BACHELOR OF INDUSTRIAL STUDIES.

FINAL EXAMINATION- 2011/2012

TTX3234 – TEXTILE PREPARATION

DURATION – THREE HOURS



DATE: 14th MARCH 2012

TIME: 14.00 – 17.00 HOURS

Please write your Registration number on the dotted line given below:

Reg. No.:

Total number of questions is 10. Total number of questions to be answered is 06. Question number one is compulsory and carries 25 marks. All other questions carry (15) marks each.

Part 1
Compulsory question

Q1. (a) Name two (02) chemical cleaning processes used for cleaning of fabrics.
(02 Marks)

- (I)
- (II)

b) List down (03) three impurities found on wool.
(03 Marks)

- (I)
- (II)
- (III)

c) What do you understand by “carbonization of wool”?
(03 Marks)

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d) Name three (03) types of enzymes used in desizing of cotton. (03 Marks)

(I) -----

(II) -----

(III) -----

e) State four (04) types of impurities removed by the scouring treatment of cotton.

(02 Marks)

(I) -----

(II) -----

(III) -----

(IV) -----

f) State two mechanical cleaning methods available to clean a fabric at Grey State. (02 Marks)

(I) -----

(II) -----

g) Explain the term "scouring" (02 Marks)

h) What do you understand by "mercerization"?

(01 Marks)

i) Name the bleaching agent that can be used on protein fibres as well as on cellulose fibres?

(01 Marks)

h) What do you understand by the term "detergent"?

(02 Marks)

(4)

Part 2

Answer any five (05) questions from Q2 to Q10

- 2) What do you understand by the term "desizing" (15 Marks)
Briefly describe the methods available for desizing.
- 3) Using clear diagrams explain the process of kier boiling. (15 Marks)
- 4) Describe the mercerization process and point out the qualities acquired by a mercerized cloth. (15 Marks)
- 5) With the aid of clear diagram explain the counter current washing system and its advantages. (15 Marks)
- 6) Explain the following terms (15 Marks)
a. Anionic detergent
b. Micelle
c. (1) Chemical wash (2) Colloidal wash (3) Pigment wash
- 7) With the aid of diagrams explain two machines used for chemical cleaning. (15 Marks)
- 8) What is an optical brightening agent? Explain the action of optical brightening agents on textile substrates. (15 Marks)
- 9) Describe the methods used to evaluate efficiency of (15 Marks)
a. Desizing and
b. Scouring
- 10) Compare the processes of peroxide bleaching, with sodium chlorite bleaching, pointing out the advantages. (15 Marks)