

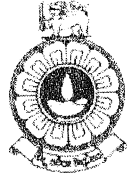
THE OPEN UNIVERSITY OF SRI LANKA

DIPLOMA IN TECHNOLOGY/ DIPLOMA IN INDUSTRIAL STUDIES

TTX3234/TTD1210 - TEXTILE PREPARATION

FINAL EXAMINATION- 2007/2008

DURATION- THREE HOURS



023

Date: 07<sup>th</sup> May 2008

Time: 1330-1630 Hrs

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

**01. Compulsory question**

*(Each part carries 2.5 marks amounting to a total of 25 marks)*

- (1). Name the three types of enzymes used in enzymatic desizing of cotton?
- (2). List three types of natural impurities found in wool.
- (3). State the three chemical methods used to remove the starch applied during the sizing operation.
- (4). State four types of impurities removed by the scouring treatment of cotton.
- (5). State four features which result in mercerisation of cotton fabric.
- (6). What are the three main groups of detergents?
- (7). 'Woolen fabrics having coloured threads in its structure cannot be bleached satisfactorily in alkali medium'. Give reasons.
- (8). Name two reducing bleaching agents which can be used to bleach wool and silk.
- (9). State the production stages at which optical brightening agents (OBAs) can be applied to the textile materials.
- (10). What is the active component of bleaching powder?

**02 . Explain the term 'desizing'.**

Explain different methods employed for desizing,

03. Why is the scouring process considered as so important? Draw a diagram of a kier and explain how the process of kier boiling is carried out.
04. With the aid of clear diagrams explain three machines used for chemical cleaning.
05. (a) Discuss the advantages of having countercurrent washing system.  
(b) What is 'souring'?  
Briefly explain the souring process.
06. Explain the following terms.  
(a) Anionic detergent  
(b) Micelle  
(c) (i) Chemical wash  
(ii) Colloidal wash  
(iii) Pigment wash
07. Describe the term 'mercerisation'. Explain the mercerization process.
08. Discuss the bleaching agents and the bleaching conditions used for the following fiber types.  
(a) Cellulose acetate (b) Polyamide (c) Polyester
09. What is optical brightening agent?  
Explain the action of optical brightening agents on textile substrates.
10. Briefly explain how you would evaluate the efficiency of  
(a) Desizing (b) Bleaching and (c) mercerisation