

THE OPEN UNIVERSITY OF SRI LANKA

DIPLOMA IN TECHNOLOGY/ DIPLOMA IN INDUSTRIAL STUDIES

TTX4232/TTD2232 - TEXTILE COLOURATION

FINAL EXAMINATION- 2009/2010

DURATION- THREE HOURS



Date: 01st March 2010

Time: 0930-1230 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 each

01. Compulsory question

(Answer all parts. Each part carries 2.5 marks amounting to a total of 25 marks)

01. Describe the term "Kier boiling"?
02. Briefly explain the following technical terms:
 - (a) Chemical wash
 - (b) Colloidal wash
03. What are the three hydrolytic desizing methods?
04. Name three chemical compounds that can be used for bleaching of cotton fabrics.
05. What is the purpose of adding detergents to the scouring liquor?
06. What is the purpose of 'souring' treatment?
07. In the use of azoic colours, the dye is formed in the fibre when two components are brought together. What are these components?
08. State two processes employed in the dyeing of polyester.
09. Classify the acid dyes according to the acidity of dye bath.
10. What are the two main classes of vat dyes ?

02. State the main objectives of scouring ?
Explain the various types of scouring process that you have studied.
03. (a) Mention the changes you would observe in a cotton fibre when subjected to the process of mercerisation.
(b) What are the effects of transformations or changes mentioned in (a)?
(c) With the aid of simple diagrams explain the mercerisation process.
04. (a) Describe the action of any three oxidative bleaching agents.
(b) How does the action of blueing agents differ from that of optical brightening agents.
05. In your own words explain the following terms.
(a) Dyeing assistants.
(b) Mordants.
(c) Carriers.
(d) Levelling agents.
(e) Liquor ratio.
(f) Mangle expression.
06. Describe the dyeing processes that can be employed for dyeing polyester with Disperse dyes.
07. Discuss the factors that should be considered in selecting a dye.
08. (a) With the aid of a clear diagram explain the working principle of rotary screen printing machine.
(b) What are the advantages of rotary screen printing process over a roller printing process.
09. Briefly explain the printing styles you have come across in your lesson material.
10. Explain the composition and the role of constituents in the printing paste.