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THE OPEN UNIVERSITY OF SRI LANKA
BACHELOR IN TECHNOLOGY/ BACHELOR IN INDUSTRIAL STUDIES
TTX 6231 ADVANCED COLOURATION TECHNOLOGY
FINAL EXAMINATION- 2009/2010
DURATION- THREE HOURS



Date: 24th March 2010

Time: 1400 - 1700 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. What are the chemicals you would use to convert insoluble vat dyes into soluble form ?
02. Mention two dyeing assistants which you may use for acid dyes.
03. State a main advantage and a disadvantage of using direct dyes.
04. Briefly explain the term "mordant dye"?
05. What are the two main reactions (or stages) involved in azoic dyeing?
06. What is the main characteristic of sulphur dyes?
07. Briefly explain the term "Reactive dye".
08. State three dye types that can be applied for dyeing polyamides.
09. How do you understand the term "Union dyeing".
10. Briefly explain the following terms.
(a) 'Light fastness', 'Wash fastness'.

(b) Mention three other fastness tests and their importance in relation to the end use of the textile material.

02. Discuss the general methods of application of acid dyes.
03. (a) Describe different types of mordant dyes.
(b) Explain the stages involved in application of azoic dyes.
04. (a) Write an account on the general properties of sulphur dyes.
(b) Explain how the vat dyes are applied to textile materials.
05. (a) Explain how nylon is prepared for dyeing.
(b) Explain the method of application of any three dye types that can be applied to nylon.
06. Write an essay on dyeing polyester.
07. Why do you think fastness properties are so important in textiles?
Explain how wash fastness testing is carried out for cotton fabrics.
08. Discuss how the dyeing properties of fibres are affected by
 - (a) Physical structure
 - (b) Chemical structure
09. Write notes on the following
 - (a) How human eye perceives colour.
 - (b) Defective colour vision
 - (c) Luminosity,
 - (d) Saturation.
10. Explain briefly the different methods of colour measurement.