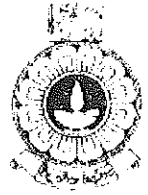


The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Textile and Apparel Technology

064



Study Programme	: Bachelor of Technology Honours in Engineering/ Bachelor of Industrial Studies Honours
Name of the Examination	: Final Examination
Course Code and Title	: TAX6362/TAX6367 Advanced Colouration
Academic Year	: 2020/2021
Date	: 20 th January 2022
Time	: 0930 -1230hrs
Duration	: 3 hours

General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of eight (8) questions in three (3) pages.
3. Write down your Index Number on all the pages of the answer scripts.
4. Answer the question one (01), which is compulsory, and five (05) more questions from 02 to 08. Question one (01) carries twenty-five (25) marks, and questions two (02) to eight (08) carry fifteen (15) marks each.
5. Answers for each question should commence from a new page. If a question has many parts, all the parts should be answered in chronological order under the same question.
6. Write down the answered question numbers in the answer book.
7. Do not write answers to the additional questions.
8. Answers should be in clear handwriting.
9. Do not use red colour pens to write the answers.

Compulsory question

- 01.
- a) Mention why basic dyes are called cationic dyes. (02 marks)
 - b) State three (03) dyebath assistants. (02 marks)
 - c) Name two (02) fibre types that can be dyed with acid dyes. (02 marks)
 - d) Compare and contrast the structure of direct dyes with acid dyes. (04 marks)
 - e) What is the principle of mordanting? (03 marks)
 - f) What do you understand by the term 'blinding' related to Azoic dyeing? (03 marks)
 - g) Give two (02) reasons why natural colouring materials are not popular in dyeing? (02 marks)
 - h) Name two (02) dye types that can be applied to polyamides? (02 marks)
 - i) What is 'dye affinity'? (02 marks)
 - j) Mention the meaning of the following terms related to colour vision (03 marks)
 - i. Hue
 - ii. Saturation
 - iii. Luminosity

Answer any five (05) questions from the following seven (07) questions.

02. a) Briefly explain the properties of basic dyes. (06 marks)
- b) Acid dyes are classified into three (03) classes based on the application. Write a brief note on these three (03) classes. (09 marks)
03. a) Explain the stages involved in the application of azoic dyes. (08 marks)
- b) Briefly describe different types of mordant dyes. (07 marks)
04. a) Write a brief note on the general properties of sulphur dyes. (08 marks)
- b) Briefly explain the application of Indigo to cotton using vat dyes. (07 marks)

05. a) Give reasons why disperse dyeing are more suitable for polyester fibre dyeing. (07 marks)
- b) Explain the method of high-temperature polyester dyeing. (08 marks)
06. a) Briefly explain the method of dyeing a fibre mixture of cotton and wool using direct dyes. (05 marks)
- b) Using the cross-dyeing method write a brief note on dyeing a fibre mixture of protein and cellulosic fibres. (05 marks)
- c) Briefly explain how to dye polyester and polyamide fibre mixture. (05 marks)
07. Explain the Munsell colour system and the CIE colour system. (15 marks)
08. Write short notes on the following.
- a) Colour fastness (05 marks)
- b) Dye migration (05 marks)
- c) Water-soluble sulphur dyes (05 marks)

-End of the question paper-

