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## Fourth Semester B.Tech. Degree Examination, July/August 2022

### Chemical Processing of Textiles - II

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

#### Module-1

- 1 a. Write the classification of dyes. Briefly explain the principle of dyeing. (10 Marks)
- b. Discuss the theories of dyeing. (10 Marks)

**OR**

- 2 a. Explain the process of selection of dyes for specific end uses. (10 Marks)
- b. Write a note on effect of fibre structure on dyeing behavior of Textiles fibres. (05 Marks)
- c. Briefly explain the action of electrolyte and effect of dye bath temperature on dyeing behavior of textile materials. (05 Marks)

#### Module-2

- 3 a. Describe the differences between cold brand and hot brand reactive dyes. (10 Marks)
- b. Explain the basic principle of application of Vat dyes on cotton. Give the properties of Vat dyes. (10 Marks)

**OR**

- 4 a. What are solubilised Vat dyes? Describe the properties and application of Solubilised Vat dyes on cotton. (10 Marks)
- b. Give the properties of Azoic dyes. Explain the stages of application of azoic dyes on cotton. (10 Marks)

#### Module-3

- 5 a. Give the classification of acid dyes based on their application. Discuss the affect of acid and leveling agents on dyeing performance of acid dyes on wool. (10 Marks)
- b. Explain the properties and application of basic dyes on wool and cotton. (10 Marks)

**OR**

- 6 a. What are Mordant dyes? Briefly explain different methods of dyeing of cotton by using mordant dyes. (10 Marks)
- b. Briefly explain the following :  
 i) Metal – Complex dyes      ii) Natural dyes. (10 Marks)

#### Module-4

- 7 a. Mention the characteristics of disperse dyes. Describe the mechanism of disperse dyeing of man – made fibres. (10 Marks)
- b. Briefly explain the thermosol dyeing of polyester. (05 Marks)
- c. Write a note on modified basic dyes. (05 Marks)

**OR**

- 8 a. Briefly explain various after treatments given to synthetic dyed goods. (10 Marks)
- b. Describe the methods of dyeing of blends. (10 Marks)

**Module-5**

- 9 a. Mention various advantages and limitations of garment dyeing. Explain the precautions to be taken for effective dyeing of garments. (10 Marks)
- b. With the help of a neat diagram, explain the working of Jet dyeing machine. (10 Marks)

**OR**

- 10 a. With the help of neat sketches, describe the working of Winch and Jigger. Give their suitability. (10 Marks)
- b. Write the importance of colour measurement and colour matching. Explain the working principle of Spectrophotometer. (10 Marks)

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