

**B TECH
(SEM IV) THEORY EXAMINATION 2017-18
TEXTILE CHEMISTRY - I**

Time: 3 Hours

Total Marks: 100

- Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.
2. Any special paper specific instruction.

SECTION A

- 1. Attempt *all* questions in brief. 2 x 10 = 20**
- a. Explain any two impurities in jute.
 - b. What is heat setting?
 - c. What is the purpose of bleaching of textiles?
 - d. Explain the role of natural dyes.
 - e. What is the role J box?
 - f. Explain yarn scouring.
 - g. Difference between direct and basic dyes.
 - h. Explain diazotization.
 - i. Describe dye fibre bond.
 - j. Role of additives in dyeing.

SECTION B

- 2. Attempt any *three* of the following: 10 x 3 = 30**
- a. Compare among various desizing methods. What are HT enzymes?
 - b. What are the steps involved in gas singeing? Describe the importance of each step.
 - c. What are hydraulic jumbo jiggers? Describe the scouring process in this machine.
 - d. How fibre structure is responsible for accepting the dyes?
 - e. Compare the natural dyes with synthetic dyes. What are their advantages and disadvantages?

SECTION C

- 3. Attempt any *one* part of the following: 10 x 1 = 10**
- (a) Give the process sequence for scouring with importance of each step.
 - (b) Why is the heat-setting of polyester fabrics carried out before dyeing? What are the morphological changes taking place in this process?
- 4. Attempt any *one* part of the following: 10 x 1 = 10**
- (a) Explain the process of bleaching of silk. Discuss universally accepted bleaching agents.
 - (b) Describe the defects and damages in preparatory process; their causes and remedies.

5. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) Discuss the significance of natural dyes in carpet industries. What are their merits and demerits?
 - (b) Describe the extraction process of dyes and their standardization.
6. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) Briefly explain the mechanism of direct dyes and their application procedure in industry.
 - (b) Discuss the effect of various process parameters on the dyeing process. Also explain the roll of additives in dyeing process.
7. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) What are the drawbacks of direct dyes? Describe the various methods for overcoming such problems. Which one is the most widely used in industry?
 - (b) Discuss the use of mordants for dyeing of cellulosic fibres.

uptunotes.com