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B.TECH
(SEM IV) THEORY EXAMINATION 2018-19
ADVANCE TEXTILE CHEMISTRY

Time: 3 Hours ***Total Marks: 70***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 7 = 14**

(a) Define chromophore of dyes.
(b) Define symmetry and substantivity of dyes.
(c) State dischargeability of dyes.
(d) What is half emulsion thickener?
(e) What are acid dyes?
(f) What are pre metallised dyes?
(g) Which fibre out of wool and silk is easy to dye and why?

SECTION B

2. Attempt any *three* of the following: **7 x 3 = 21**

(a) Classify Anionic dyes. Give comparison among these dyes with respect to dyeing properties and chemical constitution.
(b) How Chrome dyes are dyed in Meta chrome process? Give advantages and disadvantages of this process. Discuss fastness properties of chrome dyes.
(c) How do you quantify colours? What do you mean by CIE Lab and CIE LCH values?
(d) How rotary screens are prepared by transferring designs from computer/positive film to make it suitable for printing? Explain the importance of each step.
(e) What is feel-fresh finish? Explain the mechanism involved in this finish.

SECTION C

3. Attempt any *one* part of the following: **7 x 1 = 7**

(a) Which type of dye is most suitable for Hand knotted woolen carpets? Give reasons. Discuss the fixation of 1:1 metal complex dyes onto wool.
(b) Describe the application of strongly polar 1:2 metal complex dyes. Explain the the fixation of 1:2 metal complex dyes onto wool.

4. Attempt any *one* part of the following: **7 x 1 = 7**

(a) How does magnetic squeeze system work in rotary screen printing? Describe the working and advantages of it.
(b) What is quick change device? How does it help in improving productivity of machine? State the size and surface characteristics of magnetic squeeze rods.

5. Attempt any *one* part of the following: **7 x 1 = 7**

(a) What are styles of printing? Describe the function of ingredients of discharge printing on cotton fabric.
(b) Describe the method of fixation of dyes and pigments on printed materials.

6. Attempt any *one* part of the following: 7 x 1 = 7

(a) Describe 555 sorting system of various batches with examples.

(b) Describe step by step how recipe of a shade is predicted by computer colour matching system. How do you calculate the correction factor between predicted recipe and bulk production recipe?

7. Attempt any *one* part of the following: 7 x 1 = 7

(a) What are H-acid, Gamma acid and J-acid? State importance of these in synthesis of dyes.

(b) What are dye intermediates? How are these helpful in introducing auxochromes in dyes?