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**B TECH**

**(SEM-VIII) THEORY EXAMINATION 2017-18  
TEXTILE CHEMISTRY III**

**Time: 3 Hours**

**Total Marks: 100**

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

**SECTION A**

**1. Attempt all questions in brief. 2 x 10 = 20**

- (a) Define Pseudo plastic behavior of thickeners.
- (b) Why starch alone is not used as printing thickener?
- (c) Define flow property of thickeners.
- (d) What are guar gums?
- (e) What do you mean by methods of printing?
- (f) What are chromophores and auxochromes?
- (g) What are binders of pigments?
- (h) What do you mean by CIE Lab?
- (i) State the suitability of starch-tragacanth as reactive dye printing thickener.
- (j) What are discharging chemicals used in printing?

**SECTION B**

**2. Attempt any three of the following: 10 x 3 = 30**

- a) How azo chromophores are made in dye synthesis? Describe with complete chemical reactions involved.
- b) State various chromophores used to make vat dyes and acid dyes with chemical structures.
- c) Describe various applications of nano technology in the finishing of textiles.
- d) Explain how smart textiles make our life comfortable.
- e) How rotary screens are prepared by transferring designs from computer/positive film to make it suitable for printing? Explain the importance of each step.

**SECTION C**

**3. Attempt any one of the following: 10 x 1 = 10**

- a) How nano particles are micro-encapsulated? Give such encapsulation technique in order to obtain anti-microbial finish on textiles.
- b) Describe various finish applications with respect to feel fresh on textiles.

**4. Attempt any one of the following: 10 x 1 = 10**

- a) Describe the Colour Discharge style of printing on cotton fabric using vat dyes and functions of ingredients of the paste.
- b) Describe the industrial process of stock thickener preparation. What are the ingredients added to make stock thickener?

**5. Attempt any one of the following: 10 x 1 = 10**

- a) How do you quantify colours? What do you mean by CIE Lab and CIE LCH values?
- b) Describe various sorting methods of dyed batches with examples. State calculation of DE (CIE 94).

6. Attempt any one of the following:

10 x 1= 10

- a) How does magnetic squeeze system work in rotary screen printing? Describe the working and advantages of it.
- b) Describe various parts of rotary screen printing machine. Also mention the advantages of it over other type of printing machines.

7. Attempt any one of the following:

10 x 1= 10

- a) Explain quick change device in rotary screen printing machine. Describe in detail the application of auto dosing system in preparing printing paste.
- b) What do you mean by K/S values? Draw typical K/S vs Concentration curve. Give explanation if the curve is not matching with the ideal curve.