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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Textile) (2011 Onwards) (Sem.-5)**TEXTILE CHEMICAL PROCESSING-II****Subject Code : BTTE-504****Paper ID : [A2733]****Time : 3 Hrs.****Max. Marks : 60****INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A**1. Answer the following :**

- a) Explain additive and subtractive theories of colour with example.
- b) Explain surface dye strength (K/S) and dye uptake on textiles with example.
- c) Explain interaction among fibre, dye and chemical on after-treated direct dyed cotton.
- d) Explain function of sodium nitrite in dyeing cotton with solubilised vat dyes.
- e) Explain with justification, if reserve shade can be developed on nylon-cotton blend.
- f) Explain with chemical aspects, how sodium hydrosulphite reduces vat dyes.
- g) Explain fundamentals of preparation of screen in photo-electric method.
- h) Discuss procedural difference in printing cotton fabric in direct, discharge and resist styles of printing.
- i) Classify thickeners with examples.
- j) Discuss difference in working of a jet and HTHP beam dyeing machine.

SECTION-B

2. Explore possibility of producing various shades on nylon-wool blend with justification. State related dyeing technology for the possible shades. (2+3)
3. With a neat labelled sketch, explain construction, function of each part and working of a single colour roller printing machine. (2+3)
4. State primary and confirmatory tests for identification of direct dyes of cotton. (5)
5. Explain methodologies to be adopted for transfer printing of polyester-cotton blends. (5)
6. Along with print paste formulation, function of chemiocalcs and sequence of printing, discuss reactive printing of cotton in steaming method. (5)

SECTION-C

7. Explain problems in dyeing PAN with basic dyes. Discuss retarder and non-retarder methods of dyeing PAN along with mechanism of working of different types of retarders. (2+4+4)
8. With the help of a neat labeled schematic diagram, describe working principle, construction, function of each part and working of a loose fibre dyeing machine. (5+5)
9. Along with print paste formulation, function of chemicals and sequence of printing, discuss vat printing of cotton in pre and post-reduction methods. Explain various precautions to be taken during this printing process. (8+2)