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B.Tech.(Textile) (2011 Onwards) (Sem.-4)

Subject Code : BTTE-404

Paper ID : [A2753]

Max. Marks : 60

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.

1. Answer the following :

- (a) Explain citing proper reasons, at what stage of chemical processing, polyester fabric is singed.
- (b) Explain influence of temperature in efficiency of bromite desizing.
- (c) Explain any special care to be taken during scouring of coloured cotton textiles.
- (d) Explain function of sodium nitrate in sodium chlorite bleach.
- (e) Explain mechanism of increase in reactivity of cotton during mercerisation.
- (f) Explain mechanism of shrinkage of polyester textiles during heat setting.
- (g) Discuss importance of selection of sewing thread for stitching fabric pieces meant for carbonisation.
- (h) Explain influence of pre-moistening of cotton fabric for calendering.
- (i) Explain mechanism of development of softness during decatizing.
- (j) Explain reason of formation of crease marks on cotton textiles.

SECTION-B

2. Discuss methodology to evaluate efficiency of scouring of cotton textiles with examples. (5)
3. Describe sodium chlorite bleaching of manmade fibres with influence of parameters. (5)
4. Explain influence of parameters of enzyme desizing for cotton with various classes of enzymes. Discuss mechanism of digestion of starch by enzymes. (3+2)
5. With a flow-sheet, explain batch carbonisation of polyester-cotton blend. Also explain various precautionary measures to be taken during this process. (3+2)
6. Classify softeners with examples. Explain chemical nature of softeners and their suitability for textile application. (2+3)

SECTION-C

7. With the help of a neat labelled schematic diagram, discuss construction, function of various parts and working of a sanforizing machine. (5+5)
8. Explain mechanism of heat setting citing influence of heat and tension on the properties of heat set fabric. Discuss change in properties of polyester after heat setting. (5+5)
9. Design a process sequence for woollen textiles. Explain objective of each step in the sequence and methodology to achieve objectives. (3+7)