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11819

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) *All questions are compulsory.*
 - (2) *Answer **each** next main question on a new page.*
 - (3) *Illustrate your answers with **neat** sketches **wherever** necessary.*
 - (4) *Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.*

Marks

1. Attempt **any five** of the following : **20**
 - a) State and explain objective of sizing. Enlist various types of sizing agents.
 - b) Give the process flow chart for pretreatment of 100% cotton woven fabric with function of each process.
 - c) Explain the classification of desizing treatments with their advantages and limitations.
 - d) Explain the changes brought about in fabric after scouring process and bleaching process.
 - e) Enlist the bleaching agents with their chemical formulae.
 - f) Explain the objects of mercerisation.
 - g) Describe any one method for degumming of silk.

2. Attempt **any four** of the following : **16**
 - a) Enlist the size ingredients and state their functions.
 - b) What is congealing property of starches ? Explain its significance in sizing.
 - c) Explain four point system of fabric inspection.
 - d) With neat outline sketch, explain working of 2-cutter shearing and cropping machine.
 - e) Give brief classification of singeing machines. Also state objects of singeing.
 - f) Explain the mechanism of desizing.

3. Attempt **any four** of the following : **16**
 - a) With neat sketch, explain working of gas singeing machine.
 - b) Explain the method of singeing for knitted fabrics.
 - c) Explain advantages and disadvantages of enzyme desizing.

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- d) With neat sketch, explain working of vertical pressure Kier.
- e) Explain the method for evaluation of desizing efficiency.
- f) Explain the method for scouring of polyester/cotton and polyester/viscose.
4. Attempt **any four** of the following : 16
- a) Differentiate between solvent scouring and bio-scouring.
- b) Explain semi-continuous scouring process.
- c) Describe scouring of cotton in Jigger machine.
- d) Explain the mechanism of sodium hypochlorite bleaching.
- e) State the role of stabilizer in peroxide bleaching. Enlist names of two stabilizers.
- f) Explain the hydrogen peroxide bleaching for cotton fabric.
5. Attempt **any four** of the following : 16
- a) Explain the method for evaluation of bleaching efficiency.
- b) Differentiate between sodium hypochlorite and sodium chlorite bleaching.
- c) Explain the concept of causticization.
- d) Explain the various changes brought about by mercerisation in cotton.
- e) Describe the method for evaluation of mercerisation efficiency.
- f) Give the factors affecting mercerisation process.
6. Attempt **any four** of the following : 16
- a) Differentiate between pad-chain and pad-chainless mercerisation processes.
- b) Describe yarn mercerisation process.
- c) With neat sketch, explain mercerisation of woven fabrics by pad-chainless mercerisation method.
- d) Explain liquid ammonia mercerisation process.
- e) Explain the process sequence for pretreatment of woolen goods.
- f) What is milling of wool ? Explain the process.
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