22460

22232

3 Hours / 70 Marks Seat No. | | | | | | | | |

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) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following : **10**

(a) Give any two examples of chemical and mechanical finish.

(b) Draw chemical structure of any two cationic softner.

(c) State the advantages of resin finishing.

(d) Name any two OBA with their chemical structure.

(e) State the thermal behaviour of wool and nylon fibre.

(f) Define limiting oxygen index with one example.

(g) State the objects of antimicrobial finish.

2. Attempt any THREE of the following : **12**

(a) Describe with neat sketch construction and working of sanforising machine.

(b) Describe the application procedure of cationic softner used for cotton fabric. Justify its uses for the same.

(c) Describe the mechanism of resin finishing for 100% cotton fabric.

(d) Explain the burning cycle of textile fibre.

3. Attempt any THREE of the following : **12**

(a) State the advantages of exhaust and padding application methods of finishing.

(b) Describe mechanism of cationic softner with cotton fabric. State the properties of cationic softner.

(c) Explain BTCA as cross linking agent. State advantages and disadvantages.

(d) Explain solid and gas phase flame retardancy for cotton.

4. Attempt any THREE of the following : **12**

(a) Describe crease recovery angle method of evaluation of resin finishing for cotton.

(b) Describe catalyst used in resin finishing with example, explain the reaction mechanism.

(c) Give significance of OBA and state its chemical properties (any three).

(d) State any two flame retardant finish with their chemical structure and properties.

(e) Describe the properties of antimicrobial finish.

5. Attempt any TWO of the following : **12**

(a) Explain mechanism of OBA for 100% cotton fabric with a neat graph.

(b) Describe method for evaluation of antimicrobial finish with their norms.

(c) Choose antimicrobial finish for cotton. State the mechanism and properties for the same.

6. Attempt any TWO of the following : **12**

(a) Calculate amount of chemical and water required for finishing of 100% cotton fabric for following data :

(1) Quality = 100% cotton

(2) Quantity = 1,00,000 m

(3) GLM = 300

(4) % expression = 75%

(5) Required finish = 10 gpl

(b) Choose relevant softner for wool fabric with justification & give its application procedure.

(c) Select relevant cross linking agent for resin finish of 100% cotton with justification.