17342

11920

3 Hours / 100 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 : **4 × 5 = 20**

(a) What are the objects of sizing ?

(b) Write the general pre-treatment sequence for 100% cotton fabric and polyester / cotton blend fabric.

(c) Write the objects of desizing. Give the classification of desizing methods.

(d) Define scouring. What are the different reactions involved in scouring process ?

(e) Write the advantages and disadvantages of H_2O_2 bleaching.

(f) Define mercerisation. What are the objects of mercerisation ?

(g) Write the process sequence for woollen & worsted fabric processing.

2. Attempt any FOUR : **4 × 4 = 16**

(a) Write the procedure to find out moisture content from starch powder.

(b) Describe the 4 point system used in grey fabric inspection.

(c) Write the different factors affecting on enzyme desizing.

(d) With neat diagram write the working principle of Kier boiler machine.

(e) Describe the mechanism of H_2O_2 bleaching.

(f) Write the various changes brought by mercerisation in cotton.

3. Attempt any FOUR : **4 × 4 = 16**

(a) Enlist different ingredients used in sizing paste with their functions.

(b) With neat sketch write working of two cutter shearing and cropping machine.

(c) Write the procedure of enzyme desizing by pad batch method.

(d) Write the method of evaluation of efficiency of scouring.

(e) Compare H_2O_2 bleaching with NaOCl bleaching.

(f) Describe the crabbing process for wool.

4. Attempt any FOUR : **4 × 4 = 16**

(a) Write the size paste formulation for 100% cotton yarn.

(b) A fabric role of 120 yard long and 48 inch width contain following defect :

(1) 2 defect upto 3 inch

(2) 5 defect from 3 to 6 inch

(3) 1 defect from 6 to 9 inch

(4) 3 defect over 9 inch

Give conclusion for whether fabric selected or rejected if selection criteria is 40 defect per 100 sq. yard.

(c) Describe the mechanism of acid desizing.

(d) Write effect of pH on H_2O_2 bleaching.

(e) Write the difference between mercerisation and causticization.

(f) Define degumming of silk. Explain any one method for degumming of silk.

5. Attempt any FOUR : **4 × 4 = 16**

(a) Singeing of cotton carried out befour desizing whereas singeing of polyester is carried out after dyeing, explain why ?

(b) Write the procedure for scouring of 100% cotton fabric with recipe.

(c) Describe the bio-scouring process for cotton fabric.

(d) With neat sketch write the working of yarn mercerisation machine.

(e) Explain the BAN method for evaluation of efficiency of mercerisation.

(f) Enlist the preparatory process for silk.

6. Attempt any FOUR : **4 × 4 = 16**

(a) With neat sketch explain the construction & working of gas singeing machine.

(b) Write construction and working of soft flow machine for scouring of cotton.

(c) Compare the H_2O_2 bleaching with $NaClO_2$ bleaching.

(d) Describe the procedure for bleaching of polyester with chemical recipe.

(e) With neat sketch describe the working of pad chain mercerisation machine.

(f) Write the difference between hot and cold mercerisation process.
