



Department of Textile Engineering
Jashore University of Science and Technology
4th Year 1st Semester B.Sc. (Engg.) Final Examination-2021
Course Title: Apparel Manufacturing Engineering-III
Course Code: TE 4107

Time: 3 Hours

Total Marks: 72

N.B. - Answer any six from the following questions. Maintain sequence in answering each question. Figures shown in the right margin indicate full marks.

1. a) Define clothing comfort. [2]
b) Explain the role of peripheral blood vessels in regulating body temperature. [4]
c) Delineate the mechanism of maintaining the constant 'core' temperature of the human body. [6]
2. a) Discuss the flow chart of subjective perception of comfort. [3]
b) Define wearable textiles. Discuss the flow of human sensory mechanisms. [4]
c) How do special construction and garments fit to improve the thermal comfort in clothing? Explain briefly. [5]
3. a) Point out the laboratory measurement of thermo-physiological comfort. [2]
b) Distinguish between thermophysical comfort and sensory comfort. [2]
c) Which factors affect the selection of clothing? Explain with example. [4]
d) Discuss the measuring thermal insulation of protecting clothing using a manikin. [4]
4. a) Define garment dyeing with its advantages and disadvantages. [3]
b) Differentiate between garments dyeing and fabric dyeing. [3]
c) Define garments washing. Enlist effects of garments washing. [2]
d) Enlist different garment washing techniques and shortly discuss Tie-dyeing technique for garments washing used in the apparel industry. [4]
5. a) Why catanizing is done in the case of garment dyeing? [2]
b) What is top dyeing and reverse dyeing? Why over-dyeing is done? [2]
c) Discuss the process sequences of high white garment dyeing. [4]
d) Sketch the schematic diagram of the rotary drum dyeing machine, general parameters, features, and its working principles. [4]

6. a) Describe the hand scraping process. [3]
b) Show the difference between sand blast and hand sand. [3]
c) Grade abrasive papers used in scraping. [2]
d) Explain the denim destroy process by needle and knife briefly. [4]
7. a) Write the confirmation of the formaldehyde test of textile materials. [2]
b) Discuss the Nickel release test: BS EN 1811 (22) and BS EN 12472 (23). [3]
c) Define REACH. Mention the basic requirements of GOTS certification. [4]
d) Which product safety requirements are mandatory for children's apparel? [3]
8. a) Suppose a seven-ply carton has a length of 80cm, a width of 60cm, and a height of 30cm. Calculate the carton consumption for 500pcs carton box. [2]
b) Suppose you want to make a T-Shirt. The T-shirt has 90 inches 3 thread overlock stitches, 48 inches of flatlock stitches, 18 inches 1 needle chain stitches, 16 inches of single needle plain machine stitches, normal GSM is 150. Let's find out the consumption of sewing thread in meters? [3]
c) Calculate the fabric consumption for a basic shirt in yds. Assume all particulars where necessary. [7]
