

Master of Design (M.Des.) Examination, 2019

Semester - II

Specialization in Textiles

Paper – MTD-II/03

(Technology of Dyeing and Printing)

Time: Three Hours

Full Marks: 40

Questions are of value as indicated in the margin.

Question No. 1 is compulsory and answer any **three** from the rest

1. a) What is roll off angle? 1x10=10
b) For a super hydrophobic material the contact angle should be _____.
c) Define glass transition temperature?
d) Draw any two isotherms for dye-fibre system.
e) Name two compounds which are commonly used as reducing agent.
f) Define standard affinity.
g) Differentiate between dye and pigment.
h) What is the significance of SPF value?
i) What is crease?
j) Define LD₅₀.
 2. a) What are the objectives of UV protective textiles? Discuss the effect of cover factor on SPF value. 2+2
b) Define the terms: Crease resistance, Durable Press and Permanent Press. 6
 3. a) What is style methods of printing? 3
b) Differentiate resist and discharge style of printing? 2
c) Discuss the printing process of cotton fabric with pigment colour. Mention the recipe, fixation condition and after treatment, if any. 5
 4. a) Differentiate water proof and water repellent finish. 4
b) Define the terms: Substantivity, Exhaustion, Substantivity ratio. 6
 5. a) Explain the role of glass transition temperature in polyester dyeing. What are the differences between Nernst and Langmuir isotherm? 2+2
b) What are the advantages and limitations of reactive colour? Classify reactive dyes. 4+2
 6. a) What are the objectives of Green Technology ? State the name of three global regulatory bodies. 2+2
b) Discuss in brief about the eco-friendly processing of textiles. 6
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