22670

23124

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

Instructions – (1) All Questions are *Compulsory.*

(2) Attempt any *Six* Questions including Question No. 1 which is *compulsory*.

(3) Illustrate your answer with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) 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) Define the term 'site' with example.

b) Define :– working efficiency and machine efficiency.

c) Enlist the water quality norms for wet processing.

d) State any two fuels with their calorific value.

e) Name any four chemicals used as flame retardant for textiles.

f) Name any four chemicals used in finishing of cotton fabrics.

g) Name any four material handling equipment used in textile industry.

Marks

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

a) Describe procedure to calculate production of textile industry.

b) Explain the consumption of water per shift for mercerising 100% cotton on a padless chainless mercerising machine.

c) Calculate total electrical energy required for finishing of 1,00,000 meter 100% cotton fabric. [Machine - slender]

d) Describe advantages of good lighting in textile wet processing units.

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

a) Summarise production norms of bleaching and mercerisation process.

b) Suggest the different methods of conserving and reusing water in finishing department.

c) Calculate the consumption of steam energy in a sanforizer machine for ten thousand meters cotton fabrics.

d) Calculate dyes and chemical required to dye 50,000 meter 100% cotton fabric with 5% sulphur dye. [Machine - fully automatic jigger]

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

a) Explain parameter to be considered during construction of modern process house.

b) Calculate number of rotary screen printing machine required to print 1,25,000 meter fabric having gsm 350 in one shift.

c) Describe different methods to calculate the consumption of electrical energy in process house.

d) Suggest quantity of chemicals required for dyeing of 100% polyester fabric with 6% dye on Jet machine.

e) Describe various accidents in textile processing industry.

Marks

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

a) 'Maharashtra' is the best location for textile industry in India. Justify.

b) Compute and compare production calculation for PDPS and E-control machines for dyeing.

c) Calculate the cost of water per meter and quantity of water consumed in process house for following data:

Fabric type	- 100% cotton
Quantity	- 3,50,000 mt.
Linear density	- 10 m/kg.
Cost of water	- 18 Rs/m^3
Process	- CBR Bleaching.

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

a) Calculate cost of water parameter for following data:

i)	Quantity	- 15,000 meter
ii)	L.D.	- 8 m/kg
iii)	Machine	- Automatic jigger
iv)	% shade	- 3%
v)	Dye	- Reactive dye
vi)	Cost	- 30 Rs/m^3.

b) Calculate electric energy required and cost of energy per meter for printing of 1 lakh meter fabric on rotary screen printing machine. [cost = 4 Rs/Unit]

c) Calculate cost of chemicals required for finishing per meter of 100% cotton for following data –

Quantity	- 25,000 mt.,
GSM	- 140 gm
Cost of Chemical	- Rs. 450/kg (150 gpc)
Cost of Catalyst	- Rs. 900 / kg (10 gpc)
% Expression	- 70%

Assume suitable data if required.
