

17688

15162

3 Hours / 100 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Answer each next main Question on a new page.
(3) Assume suitable data, if necessary.
(4) Use of Non-programmable Electronic Pocket Calculator is permissible.
(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: **20****
- Write the production norms for CBR and pad chain mercerising machine.
 - Give the quality parameter of water required for process house.
 - How we can conserve the water in pretreatments?
 - Explain various steps to minimise consumption of energy.
 - Give the norms of lighting in textile industry.
 - What is the importance of material handling in processing?
 - Give the different material handling equipments from store.

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- 2. Attempt any TWO of the following:** **16**
- a) Give the selection criteria for selection of site for modern process house.
- b) Calculate number of singeing machine required for singeing with following parameter.
Quantity = 100% cotton
Machine = osthoff singeing machine.
Quantity = 1,75,000 meters
Linear density = 8 m/kg
- c) Calculate cost of water meter and quantity of water required in process house for following data:
Quality = 100% cotton
Quantity = 150000 m
Linear density = 8 m/kg
Cost of water = 16 Rs/m³
Process = Conventional unmercerised bleaching.
- 3. Attempt any TWO of the following:** **16**
- a) State various types of fuels with their, properties advantages and disadvantages in dye house.
- b) State object of lighting. Describe types of lighting sources.
- c) Give accident's and their causes in textile industry.
- 4. Attempt any TWO of the following:** **16**
- a) What are the effects of good layout and bad layout of dye house on overall production and it's future.
- b) Explain the production norms in bleaching department.
- c) Write the developments in processing machineries for water conservation.

- 5. Attempt any TWO of the following:** **16**
- a) Calculate the number of batches per day for dyed 50 tonnes of 100% polyester fabric on 150 kg capacity on ten jet dyeing machine.
 - b) Give measures to conserve energy in dyeing and printing departments in dye house.
 - c) What are the goal of material handling. How it is usefull in dye house?
- 6. Attempt any TWO of the following:** **16**
- a) Describe the selection criteria for selection of location for fabric processing unit.
 - b) Calculate cost of water per meter for dyeing cotton fabric with following details:
Quality = 100% cotton
Quantity = 11500meter
Linear density = 8 m/kg
Cost of water = 30 Rs/m³
Sequestering agent = 70 Rs/kg
Hardness of water = 410 ppm
Machine used = 150 kg Jigger
% shade = 6%
Class of dye = Procion Brill Red HESB
 - c) State the consumption norms of steam in wet processing. Enlist various ways to conserve energy in process house.
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