22670

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3 Hours / 70 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 <u>FIVE</u> of the following:**   **10**

a) Define the term "location" with example.

b) Define working efficiency and machine efficiency.

c) State the importance of MLR in textile processing.

d) State the properties of liquid fuel.

e) Suggest the suitable chemical recipe for resin finish of 100% cotton fabric.

f) Enlist the chemicals required for bleaching of cotton.

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) Describe method to conserve water in dyeing department.

c) Calculate steam required par meter if

    i) Quality = 100% cotton

    ii) Quantity = 10,000 m

    iii) L.D. = 10 m/kg

    iv) Process : combine bleaching

d) Describe the advantages of good lighting in textile process house.

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

a) Suumarise production norms of bleaching and mercerisation process.

b) Calculate quantity of water required for bleaching department for 1 lakhs mts cotton fabric.

c) Compare solid fuel, liquid fuel and gases fuel.

d) Calculate cost of chemical for dyeing of 1500 m cotton fabric with 3% reactive dye. [Cost : reactive dye = 400 Rs/kg, common salt = 10 Rs/kg, Na_2CO_3 = 15 Rs/kg]

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

a) Describe criteria for selection of location for modern process house.

b) Calculate production norms for cold-pad-batch machine for reactive dyeing.

c) Calculate amount of energy required to evaporate 1 lit of water from a fabric having % expression 100%.

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

e) Describe accidents in textile processing industry.

5. Attempt any TWO of the following: 12

a) Suggest criteria for selection of site for modern process house.

b) Calculate number of jigger machine required for dyeing of 20000 meter 100% cotton fabric with 3% reactive dye at a time. [Linear density of fabric = 8 m/kg]

c) Calculate quantity of water required for 15000 meter 100% cotton fabric. [Linear density = 8 m/kg, Process = conventional unmercerised bleaching]

6. Attempt any TWO of the following: 12

a) Calculate total quantity of water and cost of water for following data.

   i) Quality = 100% cotton

   ii) Quantity = 11,500 meter

   iii) Linear density = 8m/kg

   iv) Cost of water = 25 Rs/m^3

   v) Process = dyeing with reactive dye

   vi) m/c = fully automatic jigger

   vii) % shade = 6%

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

c) Calculate chemical required for dyeing of 1000 mt 100% cotton fabric with vat dyes. (assume suitable data)

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