22670

| 1242 03 H | 5 Iours / 70 Marks Seat No. |
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| Instru | uctions – (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) | State the advantages of dye house planning. |
| b) | Name any four continuous machine used for cotton processing. |
| c) | Name any four batchwise machine used for cotton processing with there MLR. |
| d) | State any two fuels with their calorific value. |

- e) Name the dyes used for dyeing of cotton fibre.
- f) State the function of salt and alkali in the dyeing of cotton.
- g) State advantages of lighting in industry.

2.

Attempt any THREE of the following:

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a) State the methodology for calculating the production norms. b) State the water quality parameters used in textile wet processing. Enlist the various machines used in textile processing industry c) with their steam consumption norms. d) Describe the importance of material handling in processing. 3. Attempt any THREE of the following: 12 a) Describe the production norms for scouring of 100% cotton fabric on kier machine. b) Describe the methods to conserve and reuse water in process house. c) Describe methods to minimize energy consumption in bleaching department with the example. d) Describe method to save chemical in dyeing process.

4. Attempt any THREE of the following:

- a) Describe the parameter to be consider for construction of modern process house.
- b) Calculate the production per day, production per shift and production per hour for finishing department.
- c) Calculate the total quantity of water for following data:
 - i) Quality = 100% cotton
 - ii) Quantity = 50,000 meter
 - iii) Linear density = 8 m/kg
 - iv) Process = continuous unmercerised bleaching.
- d) Calculate amount of energy required to dry 100kg of cotton fabric
 - i) If % expression is 100%
 - ii) If % expression is 50%
- e) Calculate chemical consumption in scouring of 100% cotton fabric in kier machine. (weight of fabric = 100 kg)

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5.

Attempt any TWO of the following: a) Suggest various tips designing modern process house. b) Calculate number of Gas singeing machines required for singeing of 100% cotton fabric with following data: Quantity = 1,00,000 m, i) Width = 150 cm, ii) iii) GSM = 200 gmCalculate the quantity of water required for dyeing of 100% c) cotton fabric with following data: Quantity = 15,000 m i) ii) Linear density = 8 m/kgiii) Machine used = 150 kg capacity soft flow dyeing machine iv) % shade = 2.5%Dye = Reactive dyev) 6. Attempt any TWO of the following: a) Calculate the total electric energy required for following data: Quantity = 10,000 m i) Width = 150 cm, ii) M/C = Rotary screen printing, iii) Number of colour = 8iv)

- b) Calculate the quantity of dyes and chemical required for dyeing of 100% cotton fabric:
 - Quantity = 30,000 m, i)
 - Linear density = 12 m/kgii)
 - Machine = Jigger iii)
- Explain the causes of accidents in wet processing. Also state c) remedies to avoid accidents.

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