

17688

11920

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) 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 FIVE of the following: **20****
- a) Draw a neat labelled layout of a modern dye house.
 - b) Elaborate the methodology of calculating the machine efficiency in detail.
 - c) Calculate the water consumption and working efficiency of 150kg capacity jigger.
 - d) Enlist the steps involved to minimise the consumption of water in pretreatment.
 - e) Write a note on the fuels used in the dye house.
 - f) Enlist and explain the different types of lighting used in process house.
 - g) Write a note on “Material Safety Data Sheet” of chemicals used in wet processing of textiles.

P.T.O.

- 2. Attempt any TWO of the following:** **16**
- a) How will you calculate the production norms / machine / shift. Also write the norms of production on continuous dyeing range.
 - b) Calculate the water consumption norms of 12 colour rotary screen printing machine and 08 colour flat bed screen printing machine.
 - c) Enlist and explain the safe methods of chemical storage and handling which are used in wet processing.
- 3. Attempt any TWO of the following:** **16**
- a) Elaborate the parameters to be considered for selection of site for a modern process house.
 - b) Write in detail the measures to consume energy in printing department.
 - c) Write a note on the norms of lighting in different wet processing departments. Also comment on the position of lighting.
- 4. Attempt any TWO of the following:** **16**
- a) Explain the production norms for gas singeing and scouring of 100% cotton fabric.
 - b) Calculate the cost of water per meter and water required in the processing of fabric for the following details.
 - (i) Process - Dyeing of 100% cotton fabric.
 - (ii) Quantity - 25,000 meters.
 - (iii) Grams per linear meter - 200 gm/mt.
 - (iv) Water cost - Rs.30 / cubic meter.
 - (v) Sequestering agent - Rs.85/kg.
 - (vi) Water hardness - 350 ppm.
 - (vii) Machine used - Jigger of 250kg capacity.
 - (viii) % shade - 3.9%.
 - (ix) Assume suitable data if required.

- c) Explain the different aspects of flooring and drainage for safe processing of fabrics. Also write a note on awareness of safety.

5. Attempt any TWO of the following: 16

- a) Write a detailed note on the causes of accidents in textile wet processing industry.
- b) Enlist and elaborate the various ways to consume steam energy in wet processing of textiles.
- c) Describe the different types of construction of a modern process house.

6. Attempt any TWO of the following: 16

- a) Differentiate between the production norms of conventional and its modern counterpart in two cases.
- b) Describe the steps to minimise water consumption in finishing department and also calculate the water consumption for a starter (Four chamber) per shift.
- c) Write a note on the developments in processing machineries for conserving energy.
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