

17688

11819

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) State object of plant layout.
- (b) Enlist the various tips for preparation of plant layout.
- (c) State the methodology for calculating the production norms.
- (d) Define fuel. Give the classification of fuel.
- (e) State advantages and disadvantages of light in processing industry.
- (f) State the causes of accidents in industry.
- (g) Enlist the safety precautions required in chemical handling.

2. Attempt any TWO of the following :**16**

- (a) Elaborate the parameters to be considered for selection of site for modern process house.
- (b) Calculate quantity of water required in liters per kg for following data :
 - (i) quantity of fabric = 15000 mtrs
 - (ii) quality of fabric = 100% cotton
 - (iii) linear density = 8 m/kg
 - (iv) width of fabric = 60 inches
 - (v) hardness of water = 430 ppm
 - (vi) process = conventional bleaching
- (c) Calculate quantity required of steam for dyeing of 750 kg of 100% cotton fabric on 150 kg fully automatic jigger. Fabric is to be dyed with reactive dye with 3% shade. Linear density of fabric is 8 met/kg.

3. Attempt any TWO of the following :**16**

- (a) Explain advantages and disadvantages of single storage building and multi-storage building. Suggest the better one.
- (b) Give the quality of water required for textile processing of various sorts. State the norms of water quality to be used in processing.
- (c) Calculate the lighting norms in bleaching department.

4. Attempt any TWO of the following :**16**

(a) Calculate the production per day, production per shift and production per hour for finishing department.

(b) Calculate the quantity of water required for dyeing of 100% cotton fabric with following data :

Quantity = 15000 metre

Linear density = 8 met/kg

Machine used = 150 kg capacity soft flow dyeing machine

% shade = 2.5%

Dye = Reactive dye

(c) Calculate amount of energy required to dry 100 kg of cotton fabric

(1) If % expression is 100%

(2) If % expression is 50%

5. Attempt any TWO of the following :**16**

(a) Calculate production per day for scouring of 100% cotton fabric in 2 ton kier machine.

(b) Describe methods to minimize energy consumption in bleaching department with the example.

(c) Enlist various methods of material handling. Explain any one.

P.T.O.

6. Attempt any TWO of the following :

16

- (a) Calculate production per day for 500 kg hydraulic jigger with following data :

Quantity = 11,275 metre

GSM = 257

Width = 150 cm

Dye = Sulphur dye

- (b) Describe four methods to minimize water consumption in wet processing
- (c) Explain the causes of accidents in wet processing. Also state remedies to avoid accidents.
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