

17688

21415

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) Explain the objectives of planning and layout of dye house.
- b) Enlist the points, which are favourable for setting of modern process house.
- c) Write a note on the production norms of any four conventional machines.
- d) Write the methodology of calculating the water consumption for a machine.
- e) Enlist and explain the different types of fuels used in a process house.

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- f) What are the different types of lighting used in process house. Also elaborate on their position.
- g) Write a note on the contents of Material Safety Data Sheet (MSDS) of chemicals used in textile processing.
- h) (i) Give production norms for stenters, drying range and decatizing.
(ii) Give water consumption norm for finishing department.

2. Attempt any TWO of the following : 16

- a) Write down the production norms for different types of singing machines and mercerising machines.
- b) Calculate the energy consumption of 1 tonne kg capacity jugger dyeing and 500 kg Jet dyeing machine for dyeing using H brand reactive dyes and disperse dyes by HTHP method respectively.
- c) Enlist and explain any four material handling methods in detail.

3. Attempt any TWO of the following : 16

- a) Write a note on the different types of construction which are developed for setting of modern process house.
- b) Describe the steps to minimise the consumption of water on continuous dyeing range and continuous bleaching range.
- c) Write a note on the lighting requirements in different departments and also write on the norms of lighting at workplace.

4. Attempt any TWO of the following : 16

- a) Write a note on the production norms of machines in finishing department.
- b) Calculate the energy consumption norm for 08 colour flat bed and 16 colour rotary screen printing machine.
- c) Write a detailed note on the different types of accidents and their causes in textile processing industry.

- 5. Attempt any TWO of the following :** **16**
- a) Enlist and Elaborate the parameters to be considered for selection of site and location for setting of modern process house.
 - b) Write a note on the measures to conserve and reuse water in printing department.
 - c) Calculate the energy consumption for 08 chamber stenter during heat setting of polyster at 190°C and application of wash-and-wear finish on 100% cotton.
- 6. Attempt any TWO of the following :** **16**
- a) Write the method of calculating the working efficiency and machine efficiency of flat bed and rotary screen printing machine.
 - b) Calculate the water consumption per machine for
 - (i) Scouring of 100% cotton in J box by continuous method and
 - (ii) Washer in printing department.
 - c) Describe the effect of different construction aspects in the safety measures in wet processing.
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