

# 17458

16117

**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) 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) What is the object of grey inspection? State the impurities present in grey fabric.
- b) Stating the names of grey inspection machines, mention the criteria for grey rejection.
- c) What are the objects of shearing and cropping and singeing processes in Textiles?
- d) What is the importance of preparation of fabric before colouration?
- e) What are dyes and pigments? Define the terms:
- (i) Percentage shade and
- (ii) Percentage exhaustion

P.T.O.

- f) What is the objective of printing? Differentiate between dyeing and printing.
- g) What are the important steps involved in dyeing of cellulose with sulphur and vat dyes.

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

- a) What are the objectives of desizing and scouring processes? Explain the process of cotton scouring in detail.
- b) What are the objectives of bleaching and mercerization? Explain a method of bleaching cotton with hydrogen peroxide.
- c) Describe the process of dyeing cellulose with direct and reactive dyes.

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

- a) Stating the important print paste ingredients explain their specific functions.
- b) What are different methods and styles of printing? Explain printing of cotton with reactive dyes by direct and discharge style.
- c) Describe the process of dyeing polyester with disperse dye by HTHP method.

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

- a) With suitable diagram explain the working of rotary screen printing machine. Also state the advantages and disadvantages of the machine.
- b) What is "Tie and dye"? Explain, Batik and Block printing in detail.
- c) Explain in detail the production of speciality prints by using:
  - (i) Flock printing and
  - (ii) Pearl printing

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

- a) What is the importance of evaluating fastness properties of dyed and printed textiles? Explain a general method for evaluating wash fastness of a dyed textile.
- b) State the norms for various fastness properties. Give details of evaluating light fastness of a dyed material.
- c) (i) Give a method of measurement of whiteness index using CCM.  
(ii) With neat diagram explain the working of Jigger dyeing machine.

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

- a) What are natural dyes? Explain the concept of dyeing cotton with natural dyes.
  - b) Describe the concept of INK jet printing technique. Write its advantages and limitations.
  - c) (i) Explain - Foam and Foil printing.  
(ii) Explain the method of evaluating rubbing fastness of a dyed cotton fabric.
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