

17564

21819

3 Hours / 100 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Use of Non-programmable Electronic Pocket Calculator is permissible.
- (5) 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) Write any four properties of disperse dyes.
- b) Draw pretreatment sequence for polyester fabric to be dyed.
- c) Give classification of retarders used in acrylic dyeing.
- d) Explain the role of swelling agents in nylon dyeing.
- e) Draw the process of flow chart for dyeing of polyester/wool blended fabric.
- f) State advantage and limitations of yarn dyeing.
- g) Draw a neat labelled diagram of package dyeing machine.

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- 2. Attempt any TWO of the following:** **16**
- a) Explain the effect of neat setting on dyeing behavior of polyester.
 - b) Explain mass colouration process of polyester. Also state its advantages and disadvantages.
 - c) Describe the terms:
 - (i) Compatibility value
 - (ii) Saturation limit. Also explain its effect on acrylic dyeing.
- 3. Attempt any TWO of the following:** **16**
- a) Explain the mechanism of them sol dyeing. Also explain the method of themosol dyeing for polyester fabric.
 - b) Explain:
 - (i) Rapid dyeing of polyester
 - (ii) Stripping of cationic dyes.
 - c) Differentiate between nylon dyeing and acrylic dyeing on the basis of:
 - (i) Dye selection
 - (ii) Dyeing method
- 4. Attempt any TWO of the following:** **16**
- a) Explain the process of low temperature dyeing of Nylon. State its advantages and limitations.
 - b) Briefly classify and explain different methods adopted for blend dyeing.
 - c) Describe:
 - (i) Role of levelling agent in nylon dyeing
 - (ii) Dyeing process for nylon/ cotton blend fabric

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

- a) Describe the terms:
 - (i) Winding Angle
 - (ii) Package density. Also state its effect on dyeing on package dyeing machine
- b) Explain inverse dyeing of polyesters cotton blended fabric. Also state its limitations .
- c) With outline diagram. Explain the working of HTHP beam dyeing machine. Write its advantages and limitations also.

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

- a) State the precautions needed while dyeing polywool blended fabric. Also explain dyeing method of poly/wool fabric.
 - b) With outline diagram explain working of continuous dyeing range (CDR) machine with its advantages and limitations.
 - c) Explain:
 - (i) Dyeing process of polyester/acrylic.
 - (ii) Role of heat exchanger in jet dyeing machine.
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