



17564

15162

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) Enlist the auxiliaries used in disperse dyeing and state their functions.
- b) Give classification of disperse dyes in detail.
- c) Explain the role of retarders in acrylic dyeing, classify retarders.
- d) Describe two faults and their remedies in nylon dyeing.
- e) Enlist the various methods used for blended fabric dyeing.
- f) Describe the terms (i) winding angle (ii) package density.
- g) State advantages and limitations of package dyeing.

2. Attempt **any two** of the following :

16

- a) Explain the distinct steps involved in dyeing of polyester by thermosol method. Also state its advantages and limitations.
- b) With a neat and labelled line diagram, explain the working of continuous dyeing range.
- c) Explain dyeing of acrylic by using basic dyes. Also explain the functioning of different retarder systems during dyeing.

3. Attempt **any two** of the following :

16

- a) Explain dyeing of polyester by HTHP jet dyeing method. Write any two advantages and limitations of dyeing by this method.
- b) Explain the modification of acrylic fibres made. Enlist the co-monomers used and comment on selection of dyes for dyeing of acrylic fibres.
- c) Write the procedure for 10 W and high temperature dyeing of nylon.

P.T.O.



4. Attempt **any two** of the following :

16

- a) Explain the role of levelling and swelling agents in nylon dyeing. Also explain nylon dyeing with acid dyes.
- b) Explain the procedure of dyeing of poly/wool blended fabric using disperse/acid dyes by two both method.
- c) Explain package dyeing method with neat sketch. Write its advantages and limitations.

5. Attempt **any two** of the following :

16

- a) Explain the steps involved in dyeing of polyester/viscose blend using disperse/vat dyes by two both method.
- b) With neat sketch explain working of HTHP beam dyeing machine.
- c) Describe the concept of rapid dyeing technique. State its advantages and limitations. (two each).

6. Attempt **any two** of the following :

16

- a)
 - i) What is saturation value ? State its importance in dyeing of acrylic fibres with basic dyes.
 - ii) Give two faults and their remedies in yarn dyeing.
 - b) Explain the different dyeing methods for dyeing of Nylon/wool. State advantages and limitations of the process.
 - c) With neat sketch explain working of soft flow dyeing machine, state its advantages and disadvantages.
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