

17467

15116

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) Describe the terms:
 - (i) Affinity
 - (ii) Exhaustion
- b) Give classification of direct dyes.
- c) Explain the chemical reaction taking place between dye and fibre during reactive dyeing.
- d) Explain vatting process.
- e) Explain Bronziness sulphur dyeing and the method to overcome it.
- f) Explain the chemical reaction of diazotisation along with favourable conditions.
- g) Explain dyeing of silk with basic dyes.

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

- a) Explain the dyeing mechanism.
- b) Describe the terms:
 - (i) % shade
 - (ii) % expression with one example each.
- c) Describe the role of sequestering agent in dyeing.
- d) Describe the effect of electrolyte on rate of direct dyeing.
- e) With conditions, explain two remedies to improve fastness properties of direct dyed goods.
- f) Give classification of reactive dyes.

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

- a) Describe the method of dyeing with HE reactive dyes by exhaust method.
- b) Describe the process of dyeing silk with reactive dyes.
- c) Give classification of vat dyes and the various dyeing conditions.
- d) Explain the vat dyeing by pigmentation method.
- e) Describe the faults in vat dyeing and their remedies.
- f) Explain various steps involved in solublised vat dyeing.

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

- a) Describe the various limitations of solublised vat dyes and methods to overcome it.
- b) Give classification of sulphur dyes.
- c) What is sulphur black tendering? Suggest the remedy for that.
- d) Explain the importance of oxidation step in sulphur dyeing.
- e) Give hot dissolution method of naphthols.
- f) Give two after treatments for azoic dyed goods.

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

- a) State advantages and limitations of Winch dyeing machine.
- b) With a neat sketch, explain the working of cabinet hank dyeing machine.
- c) Give brief classification of metal complex dyes and compare.
- d) Explain the procedure for dyeing of silk with acid dyes.
- e) What are mordants? Enlist names of four mordants used for natural dyes.
- f) Give the process of cotton dyeing with any one natural dye.

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

- a) What are ME dyes? State their application procedure.
 - b) With neat sketch, explain working of jigger dyeing machine.
 - c) With outline diagram explain continuous dyeing range.
 - d) Explain the mechanism of dyeing basic dyes on protein fibres.
 - e) Describe the process of dyeing wool with acid dyes.
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