



DF-1525

M. Sc. (Sem. III) Examination

March / April – 2016

Paper - IV : Dyes & Intermediates-I

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवडी पर अवश्य बपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="M. SC. (SEM. III)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="PAPER - IV : DYES &amp; INTERMEDIATES-I"/>	<input type="text"/>
Subject Code No. : <input type="text" value="1"/> <input type="text" value="5"/> <input type="text" value="2"/> <input type="text" value="5"/>	<input type="text"/>
Section No. (1, 2,...): <input type="text" value="Nil"/>	
Student's Signature	

(2) Figures to the right indicate full marks of the questions.

1. Answer any **THREE** of the following: [18]

- (a) What are azoic dyes? Write notes on 'Fast bases' and 'Fast Salts'. Give the synthesis of Naphthol AS-BR.
- (b) What are azo dyes? Give the mechanism of diazotization and coupling. Describe the chemistry of monoazo dyes.
- (c) Assign the position at which the coupling reactions take place:
  - (i) H-Acid
  - (ii)  $\beta$ - Naphthol
  - (iii) Chromotropic acid
  - (iv) Gamma acid
  - (v) Chicago acid
  - (vi) 2-amino naphthalene-5-sulphonic acid
- (d) Give the synthesis of:
  - (i) Mordant Black 11
  - (ii) Direct Violet 1
  - (iii) Fast Orange GGD.

2. Answer any **THREE** of the following: [18]

- (a) Classify fluorescent whitening agents giving at least one example of each class. Discuss the chemistry of fluorescent whitening agents derived from stilbene derivatives.
- (b) Give broad classification of textile fibres.
- (c) Discuss basic operations involved in dyeing process.
- (d) Give the synthesis of following:
  - (i) Tinopol-3525
  - (ii) Leukophor EFG
  - (iii) 4-acylamino-N-butyl-naphthalimide

3. Answer any **THREE** of the following: [18]

- (a) Write a note on organic pigments.
- (b) Discuss the chemistry of azine and oxazine.
- (c) Give an account of thiazole dyes.
- (d) Give the synthesis of:
  - (i) Basic Yellow 11
  - (ii) Safranin B
  - (iii) Copper Phthalocyanine

4. Answer any **THREE** of the following: [16]

- (a) Describe different methods of diazotization.
  - (b) What are white dyes? What are the characteristic properties of white dyes? Give the synthesis of Tinopol RBS.
  - (c) Describe the fastness properties of dyes.
  - (d) Explain with structures, synthesis and applications of different cyanine dyes.
-