



**SB-3582**

**M. Sc. Part-II(SF) Examination**

**March / April – 2011**

**Dyes and Drugs : Paper-II**

*(Industrial Chemistry)*

Time : 3 Hours]

[Total Marks : 70

**Instructions :**

(1)

नीचे दृष्टावेव निशानीवाणी विगतो उत्तरवही पर अवश्य लपवी. 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, Part-1 I(SF)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Dyes and Drugs: Paper-2"/>	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="0"/> <input type="text" value="7"/> <input type="text" value="6"/>	<input type="text" value="Student's Signature"/>
Section No. (1, 2,...): <input type="text" value="1&amp;2"/>	

- (2) Answer to the two sections should be written in separate answer - books.
- (3) Figures to the right indicate full marks of the questions.

**SECTION - I**

- 1 (a) Disuss the theories of Witt's and Resonance regarding the colour and chemical constitution. **12**
- (b) Explain Hyperchromic and Hypochromic effect.
- (c) What are optical brightening agents ? Classify them.  
Give the synthesis of :
- (i) Blankophor B
- (ii) Tinopol SP

**OR**

- 1 (a) Disuss the theories of Armstrong's and Nietzki's regarding the colour and chemical constitution. **12**
- (b) Explain the theory fluorescence.
- (c) Discuss the classification of dyes based on chemical constitution

- 2 (a) What are azo dyes ? Discuss the mechanism of diazotization and coupling. 12
- (b) Give detail classification of mono azo dyes with examples.
- (c) Give the synthesis of:
- (i) Caledon Jade Green XBN
  - (ii) Indanthrene Yellow 4GK
  - (iii) Indanthrene Orange FFRK

OR

- 2 (a) What are anthraquinone dyes ? How are they classified ? Give a full account of anthraquinone acid dyes. 12
- (b) Assign the position at which the coupling reactions take place:
- (i) J-acid
  - (ii) S-acid
  - (iii) Chicago acid
  - (iv) 2,4-dihydroxy quinoline
  - (v) Naphthionic acid
  - (vi) Schaffer's acid
- (c) Give the synthesis of :
- (i) Disperse Red 13
  - (ii) Mordant Black 11
  - (iii) Direct Red 28

- 3 What are reactive dyes ? Classify them. Give a detail account of reactive dyes. 11

OR

- 3 What are triphenyl methane dyes ? Classify them. Discuss a brief account of triphenyl methane dyes. 11

## SECTION - II

- 4 (a) What is Quantitative Structure-Activity Relationship ? Discuss any one important theory of QSAR. 12
- (b) Write a note on drug design.
- (c) Discuss the Phase - I metabolic process with suitable illustrations.

OR

- 4 (a) Write a note on Phase -II reaction as a drug metabolic process. **12**
- (b) What is "Drug Biotransformation" ? Explain in brief biological factors affecting drug metabolism.
- (c) Give the concept of led and lead modification in detail.
- 5 (a) Define the terms: analgesics and antipyretics. **12**  
Classify them.  
Discuss the structural variations among salicylic acid and pyrazolone derivatives in analgesics.
- (b) Give the classification of sulphonamides based on duration of action. Discuss structural variations of sulphonamides.
- (c) Give the synthesis of:
- (i) Primaquine
  - (ii) Glibenclamide
  - (iii) Dibucaine
- OR**
- 5 (a) What are diuretics ? Classify them. Give **12**  
structural variations among thiazide derivatives.
- (b) What are antibiotics ? Classify them. Give the structural variations of penicillins.
- (c) Give the synthesis of :
- (i) Chloramphenicol
  - (ii) Mephalan
  - (iii) INH
- 6 (a) Explain agonists and antagonists. Discuss in **11**  
detail bioprecursor and carrier prodrug.
- (b) Discuss mode of action of sulphonamides.
- (c) Discuss SAR of tetracyclins.
- OR**
- 6 (a) Write a note on prodrug concept. **11**
- (b) Discuss mode of action of local anaesthetics.
- (c) Discuss SAR of antimalarials.