



SE-8305

B. E. - III (Sem. V) (TP) Examination
May / June - 2011
Chemistry of Intermediates & Dyes
(New Scheme)

Time : 3 Hours]

[Total Marks : 100

Instructions :

नीचे दशांशक निशानीवाणी विगतो उत्तरवही पर अवश्य लिखनी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
B. E. - 3 (SEM. 5) (TP)

Name of the Subject :
Chemistry of Intermediates & Dyes (New)

Subject Code No. : **8 3 0 5** Section No. (1, 2,.....) : **1&2**

Seat No. :

Student's Signature

- Answers to the **two** sections must be written in **same** answer book.
- Figures to the **right** indicate **full** marks.

SECTION I

Q.1 a) Answer the following objective questions. (10)

- _____ light is absorbed and _____ light is emitted by an OBA treated fabric.
- CHO group diverts the incoming substituent to meta position. True or False. Justify.
- What is bathochromic effect?
- Show structure of H – acid.
- The intensity of the absorption is _____ due to the loss of symmetry of the molecule.
- Chlorobenzene can be converted to phenol by _____ process
- Oleum is a mixture of _____ and _____.
- Define diazotization.

b) Describe in brief various postulates of resonance theory. (10)

Q.2 a) What is sulphonation? Explain its mechanism and describe sulphonation of naphthalene along with chemical reaction. (10)

b) Describe the chemical constitutions of dye. (05)

OR

Q.2 Why the dyes were known as "Coal Tar dyes"? Discuss the destructive distillation of coal tar along with different products. (15)

Q.3 Answer any **three** of the following: (15)

- a) Reduction reactions,
- b) Eco-friendly consideration of dyes
- c) Oxidation colours,
- d) Mineral colours.

SECTION II

Q.4 a) Answer the following **objective** questions. (10)

- i) Nitrobenzene on reduction gives _____
 - ii) What is antibonding orbital?
 - iii) _____ group imparts solubility to dyes.
 - iv) Reactive dyes form hydrogen bond with the fibres. True or False. Justify.
 - v) Give chemical name of Koch acid.
 - vi) Can primaries be used directly in synthesis of dye? Yes or No Give reason.
 - vii) State the function of Sulphuric acid in nitration reaction.
 - viii) What does letter 'L' indicate in the dye name?
 - ix) Diphenyl group directs incoming substituent to meta position True or false. Justify.
 - x) Carboic oil is obtained at _____ temperature.
- b) What is the difference between dye and color? Give a brief outline of physics of color. (10)

Q.5 a) Define nitration. Explain its mechanism and describe nitration of benzene and toluene. (10)

b) Describe Dow and Cumene processes. (05)

OR

Q.5 Describe the synthesis, properties and application of following classes of dyes. **(15)**

(i) Disperse dye (ii) Metal complex dyes (iii) Reactive dyes.

Q.6 Answer any **three** of the following: **(15)**

a) Non textile uses of dyes.

b) Light oil and middle oil,

c) Nomenclature of dyes

d) Desulphonation.
