



V. P. & R. P. T. P Science College,  
B.Sc. Industrial Chemistry Vocational  
(Semester-VI) Internal Test  
DYES AND INTERMEDIATES

Date: 05/03/2019

Time: 10:00 a.m. to 12: 00 p.m.

Subject Code: US06CICV01

Total Marks: 50

**Q.1 Select the correct option for the following questions**

8

- Reactive dyes forms \_\_\_\_\_ bond with fibers possessing hydroxyl and amino group.  
a) Covalent    b) H-bond    c) ionic    d) none of these
- The functional group responsible for coloration in a dye molecule is known as \_\_\_\_\_.  
a) Chromogen    b) Chromophore    c) Auxogen    d) Auxochrome
- \_\_\_\_\_ is the most widely used metal in mordant azo dye.  
a) Chromium    b) Beryllium    c) Aluminum    d) Iron
- In Lapworts notation "Z" represents \_\_\_\_\_.  
a) The middle component    b) Coupling component having three coupling position  
c) Coupling component having two coupling position    d) Diazonium Salt
- Procion dye is included in \_\_\_\_\_ class of dye.  
a) Acid dye    b) Vat dye    c) Reactive dye    d) Mordant dye
- Nitration of alizarin in presence of \_\_\_\_\_ yields alizarin orange.  
a) Acetic Acid    b) Boric Acid    c) Phosphoric Acid    d) Sulphuric Acid
- Sulfanilic acid can be estimated by \_\_\_\_\_ method.  
a) direct    b) indirect    c) special    d) none
- Estimation of  $\alpha$ -naphthol requires \_\_\_\_\_ pH.  
a) acidic    b) basic    c) neutral    d) any range

**Q.2 Answer the following questions (Any Five)**

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- Write significance of Dipole moment in explaining color.
- Define the terms a) Chromophores    b) Auxochromes
- Explain in brief about mordant dyes.
- Give structure and coupling positions of a) H-acid    b) J-acid
- What are the limitations of reactive dyes?
- Write properties & uses of disperse dye.
- What is nitrite value and coupling value?
- Write reaction for estimation of  $\text{NO}_2$  group.

**Long Question**

- Q.3 a) Write note on types of forces involves during dyeing of fiber. 4  
b) Write witt's theory and explain how this theory relates colours and chemical constitution. 4

OR

- Q.3 a) Explain the basic operations in dyeing. 4  
b) Give chemical classification of dyes. 4  
Q.4 a) Give classification of azo-dye on the basis of application. 4  
b) Explain mordant dye and its dyeing methodology. 4

OR

- Q.4 a) Explain different types of azo dyes. 4  
b) Discuss the various methods of diazotization in detail. 4  
Q.5 a) What are disperse dye? Briefly explain dyeing mechanism of it? 4  
b) Give the synthesis of Congo Red. 4

OR

- Q.5 a) Enlist various classes of reactive dyes giving suitable examples. 4  
b) What are the roles of levelling and dispersing agent in dying application of disperse dye. 4  
Q.6 Discuss the determination of amines. 8

OR

- Q.6 Estimation of amino naphthol sulfonic acids/h-acid. 8

