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Total Number of Pages: 01

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M.TECH

P2TCBC01

2nd Semester Regular Examination 2016-17
CHEMISTRY OF DYES AND TEXTILE CHEMICALS
BRANCH: TEXTILE CHEMICAL PROCESSING

Time: 3 Hours

Max Marks: 70

Q.CODE:Z354

Answer Question No.1 which is compulsory and any FIVE (5) from the rest.
The figures in the right hand margin indicate marks.

Q1 Answer the following questions:

(2 x 10)

- _____ is an example of chromophore & _____ is an example of auxochrome.
- _____ is the 1st synthetic dye and its dye class is _____.
- _____ dyes show excellent overall fastness properties and is water _____ (Soluble/Insoluble).
- Particle size of Pigments are _____ than Dyes and applied with _____.
- Acid dyeing is performed in _____ pH and basic dyeing is performed under _____ pH.
- Name 2 intermediates for Dyestuffs.
- Name 2 dyes having azo groups.
- Give an example of chlorination reaction for dye intermediates.
- What kind of groups are responsible for solubility of dyes. Give an example.
- What is the difference between hot brand and cold brand reactive dyes?

Q2. (a) Discuss dye intermediates with chemical structure and examples

(10 +10)

(b) Explain with chemistry of hot brand, cold brand and vinyl sulphone reactive dye?

Q3.(a) Explain various reactions involved in dyestuff preparation

(10+ 10)

(b) Explain the demerits of early reactive dyes with some recent advances

Q4.

(10+10)

(a) Why multifunctional reactive dyes has been developed. Explain the fundamental chemistry.

(b) Discuss on dye intermediates and preparation.

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(10 +10)

(a) Discuss classification of dyes and their application to various fibre with properties in brief.

(b) Discuss the computer colour matching algorithm & its usefulness?

Q6.

(10+10)

(a) Explain Witt theory with suitable examples of chromophore and auxochromes in dye structure and their functions.

(b) Discuss what different aspects you ascertain about the dyes and their properties before selecting a dye?

Q7. Write short notes on the following

(20)

- Chlorination reaction
- Nitration
- Sulphonation
- Coal tar dyes