

SARDAR PATEL UNIVERSITY
Programme & Subject: M.Sc (Physical Chemistry)
Semester: III
Syllabus with Effect from: June - 2013

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| Paper Code: PS03ECHE01 | Total Credit: 4 |
| Title Of Paper: Synthetic Dyes & Pigments | |

| Unit | Description in detail | Weightage (%) |
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| I | Fundamental of dyes: General, Important chemical chromophors of dyes, Dyes Class for principle applications, Description of individual of class and synthesis of some commercial dyes. | 25% |
| II | Dyeing processes of textiles: Pretreatment of textile fibres, dyeing methods for various textiles, Textile finishes and Textile auxiliaries. Non textile dyes: Leather, Fur, Hair, Food, Ink, Photographic, indicator dyes. | 25% |
| III | Dyes for electro optical application: Molecular Orbital design, Synthesis and characteristics of functional dyes. Near infrared absorption (NIR) dyes: Introduction, Cyanine type chromophores, donor-acceptor chromophores, applications. Colorants for high technology, Color and constitution relationships in Azoacetoacetanilide pigments. | 25% |
| IV | Organic Pigments: Synthesis, Characterization and application. Some other aspects related to dyes: Non mutagenic dyes, colorants for high technology Fluorescent Brightening agents. | 25% |

Basic Text & Reference Books:-

- Advances in colour chemistry series - Vol.3
Modern colorants: synthesis and structure
Edited by A.T. Peters and H.S. Freeman
Blackie Academic & Professional (1995)
- Colour Chemistry : Synthesis, Properties and applications of Organic dyes and pigments
Heinrich Zollinger, VCH, Germany (1987)
- Critical Reports on Applied Chemistry Vol.7
Developments in Chemistry and technology of organic dyes
Edited by: J. Griffiths, Blackwell Scientific Publications (1984)
- Organic Chemistry in colour
P.F.Gordon, P.Gregory, Springer-Verlag (1983)
- Infrared Absorbing Dyes
Edited by Masaru Matsuoka, Plenum Press (1990)
- The Chemistry of Synthetic dyes and pigments by H.A.Lubs, Reinhold Publication (1955)
- The Chemistry of Synthetic dyes Vol.I-IX Edited by K. Venkataraman Academic Press (1971)
- Textile Auxiliaries By J. W. Batty
- The production and applications of fluorescent Brightening Agents
Milos Zahradnik, John Wiley & Sons. 1982

