

9. Introduction to Petrochemicals, 2nd ed. - S. Maiti (Oxford and IBH) 2002.
10. Modern Petroleum Refining Processes, 4th ed.- B.K.B. Rao (Oxford and IBH) 2005.
11. Advanced Petroleum Refining, 1st ed., G.N. Sarkar (Khanna Publishers) 1998
12. The Chemistry and Technology of Petroleum - S.G James (Marcel Dekker) 1991.
- Chrotechnology: Industrial Synthesis of Optically active compounds-R. A. Sheldon, Marcel Dekker) 1993
- Organic Chemistry- R. E. Ireland (Prentice-Hall India) 1975.
- Principles and applications of asymmetric synthesis-G D Lin, Y M Li and A S C Chan (Wiley Interscience) 2001.
13. Organic synthesis: Special techniques-V. K. Ahluwalia and R. Aggarwal (Narosa) 2003
14. Polymers as aids in Organic synthesis- N. K. Mathur, C. K. Narang and R. E. Williams (Academic Press) 1980.

OC P 557 : Organic Chemistry Practicals –VI

COURSE OUTCOME:

Enable the students:

- To gain the knowledge of preparation and purification of eighteen organic molecules using multistep organic synthetic protocol.
- To know the synthesis and purification of one derivative each of furan, indole, pyrazole, quinoline, thiazole, acridine, coumarin and triazoles.
- To learn the synthesis of picric acid, para red, methyl red, methyl orange, flourecein, eosin, indigo and dyeing of fabrics.

Preparation of Ethyl resorcinol from Resorcinol, 3-Bromo-4-methyl benzaldehyde from p-Toluedine, ϵ -Caprolactam from cyclohexanone, p-Aminobenzoic acid from p-Nitrotoluene, s-Tribromobenzene from aniline, o-hydroxyacetophenone from phenol, Benzanilide from Benzophenone, Benzylic acid from Benzoin, Benzopinacolone from Benzophenone, p-Chlorotoluene from p-Toludine, 2,5-Dihydroxyacetophenone from Hydroquinone, 2,4-Dinitrophenylhydrazine from Chlorobenzene, m-Nitrobenzoic acid from Benzoic acid, 2,4-Dinitrophenol from Chlorobenzene, o-Aminobenzoic acid from Phthalic acid, 2-Carbethoxycyclopentanone from Adipic acid, α -Acetylaminocinnamic acid from Glycine, p-Aminoazobenzene from Aniline.

Synthesis of one derivative each of Furan, Indole, Pyrazole, Quinoline, Thiazole, Acridine, Coumarin and Triazole containing heterocycles. Synthesis of Picric acid, Para red, Methyl red, Methyl orange, Flourescein, Eosin, Indigo and dyeing of fabrics.

OC P 558: ORGANIC CHEMISTRY PRACTICALS-VII

COURSE OUTCOME:

- The students will understand the separation of components from mixture of organic compounds by fractional crystallization, fractional distillation, adsorption, paper, TLC and column chromatography, purification and characterization of organic compounds.
- The students learn the determination of pKa values, molar extinction coefficients, keto-enol equilibrium, order of reactions, salt effect and effect of acidity on reaction rates.
- To know the preparation and estimation of aryloxy acetic acids, anilinoacetic acids, estimation of carbohydrates and proteins.