IV-SEMESTER

Paper III - Organic Synthesis-II

UNIT-I

Organo silanes. Synthetic applications of trimethylsilyl chloride dimethyl-t-butylsilyl chloride, trimetthylsilyl cyanide, trimethylsilyl iodide and trimethylsilyl triflate, synthetic applications of·. silyl carbanion and B-silyl carbonium ions.

Phase transfer catalysis-Principle and applications.

UNIT-II

Oxidation: Oxidations of hydrocarbons, aikenes, alcohols aldehydes and ketones oxidative coupling reactions. Use of Pb (OAC)4, NBs.. CRO3, SeO2, NinO2 Dc- alkoxyluphonium yields, KMnO4, OsO4, peracids and Ti (III) nitrate.

UNIT-III

REDUCTION: Catalytic hydrogenation (homogeneous and heterogeneous), reduction by dissolving metals. reduction by hydride transfer -reagents, reduction with hydrazine and diamide, selectivity in reduction of nitroso and ritro compounds, reductive cleavage.

UNIT-IV

Design of Orgauie Synthesis: Retrosynthesis the disconnection approach-basic principles convergent and linear synthesis.

Textbooks:

1) Some Modern Methods of Organic Synthesis W. Carothers, Third Edition,

Cambridge University Press, Cambridge, 1988.

2) Organic Synthesis: The disconnection approach, S. Warrant John Wiley & sons,

New York, 1984.

Books for Reference:

1) Modern Synthetic Reactions, Herbet O. Horase, Second Edition, W.A. Benzamine

Inc. Menio Park, California, 1972.

2) Organic Synthesis viz Boranes, Herbet C. Brown Gray, W. Kramer Alan B. Levy

and M. Mark Midland John Wiely &. Sons, New York, 1975.