OC P 408: ORGANIC CHEMISTRY PRACTICALS – I

COURSE OUTCOME:

- Enlighten the students to understand the method of organic preparation by utilizing various kinds of organic reactions,
- To understand isolation and purification of products.
- To understand oxidation reactions
- To learn substitution reaction.

Single and two stage organic preparations

1. Electrophilic substitution reactions–Preparations of p-bromoaniline, p-nitroaniline, 2,4,6-tribromophenol and picric acid.
2. Alkylations–Preparation of nerolin and N-methyl anthranilic acid.
3. Acetylations–Preparations of □-D-glucose penta-acetate and 2-naphthyl acetate.
4. Reactions with ring formation–Preparations of 1,2,3,4–tetrahydrocarbazole, 1-phenyl-3-methyl-5-pyrazolone and 7– hydroxy-4-methyl-coumarin.
5. Diazotisation reactions–Preparations of iodo, chloro and azo compounds.
6. Dehydration reactions–Preparations of cyclohexene and succinic anhydride
7. Condensation reactions–Condensations involving diethylmalonate and ethyl aetoacetate. Claisen-Schmidt, Aldol and Perkin condensation reactions.
8. Halogenation reactions-Preparation of n-butylbromide &□, □-dibromocinnamic acid.
9. Reduction reactions–Reductions of nitro compounds and carbonyl compounds.
10. Oxidation reactions-Preparation of p-nitrobenzoic acid, p-benzoquinone and adipic acid.

REFERENCES:

1. Laboratory Manual in Organic Chemistry–R. K. Bansal (New Age, New Delhi)1990.

2. Experimental Organic Chemistry–Vol. I & II–P. R. Singh et al (TMH New Delhi)1981

3. Laboratory Manual in Organic Chemistry–Dey &Sitaraman(Allied , New Delhi)1992.

4. Vogel's Text Book of Practical Organic Chemistry including Qualitative

   Organic Analysis - B. S. Furniss et al., (Longman - ELBS, London), 1989.

5. Manual of Organic Chemistry - Dey and Seetharaman.

6. A Text Book of Practical Organic Chemistry – A.I. Vogel, Vol.III.

8. Practical Organic Chemistry - Mann & Saunders.