

GUJARAT TECHNOLOGICAL UNIVERSITY

M.Pharm

PHARMACEUTICAL CHEMISTRY

SEMESTER: I

Subject Name: PHARMACEUTICAL CHEMISTRY- II

Subject Code: MPC205P

1. Synthesis of organic compounds by adapting different approaches involving (3experiments) a) Oxidation b)Reduction/hydrogenation c) Nitration
2. Comparative study of synthesis of APIs/intermediates by different synthetic routes(2experiments)
3. Assignments on regulatory requirements in API (2experiments)
4. Comparison of absorption spectra by UV and Wood ward– Fieserrule
5. Interpretation of organic compounds byFT-IR
6. Interpretation of organic compounds by NMR
7. Interpretation of organic compounds byMS
8. Determination of purity by DSC in pharmaceuticals
9. Identification of organic compounds using FT-IR, NMR, CNMR and Mass spectra
10. To carry out the preparation of following organic compounds
11. Preparation of 4-chlorobenzhydrylpiperazine. (anintermediate forcetirizine HCl).
12. Preparationof4-iodotolenefromp-toluidine.
13. NaBH₄ reduction of vanillin tovanillyl alcohol
14. Preparation of umbelliferone by Pechhman reaction
15. Preparation of triphenyl imidazole
16. To perform the Microwave irradiated reactions of synthetic importance (Anytwo)
17. Determination of log P, MR, hydrogen bond donors and acceptors of selected drugs using softwares
18. Calculation of ADMET properties of drug molecules andits analysis using softwares
Pharmacophore modeling
19. 2D-QSARbasedexperiments
20. 3D-QSAR based experiments
21. Docking study based experiment
22. Virtual screening based experiment