

<b>Semester 4</b>	<b>CL 401</b>	
		Tentative Number of days in semester: 24
<b>S No.</b>	<b>Experiment</b>	<b>No. of days</b>
<b>THEME</b>	<b>Reaction dynamics and chemical kinetics (Activation energy; rate constant; catalyst effect; and order of reaction)</b>	
1	To determine the energy of activation of acid catalyzed hydrolysis reaction of methyl acetate.	1
2	To determine the order of reaction between K <sub>2</sub> S <sub>2</sub> O <sub>8</sub> and KI	1
3	Determination of the rate and order of reaction using clock reaction	2
4	Catalyst effect on the rate of reaction using clock reaction	1
<b>THEME</b>	<b>Organic synthesis (SINGLE STEP) and spectroscopy of aliphatic (carbonyls and amines) and aromatic (non heterocyclic) compounds</b>	
7	Acetylation of primary amine : preparation of acetanilide	1
8	Coenzymed catalyzed Benzoin condensation: Thiamine hydrochloride catalyzed synthesis of benzoin	1
9	Base catalyzed aldol condensation : Synthesis of dibenzalpropanone	1
10	Radical coupling reaction : Preperation of 1,1-bisnaphthol	1
11	Use of diazonium salt : 4-nitro aniline to 1-iodo 4-nitrobenzene	1
12	Electrophilic aromatic substitution reaction : Nitration of Phenol	1
<b>MID SEMESTER EXAMINATION</b>		
13	Rearrangement reaction : rearrangement of diazoaminobenzene to aminobenzene	1
14	Three component reaction : Biginelli reaction	1
15	Derivative of carbonyl compound : Cyclohexanone oxime	1
16	Grignard Synthesis of Triphenylmethanol	1
17	Synthesis of Local Anesthetic : Benzocaine	1
18	A Hydrazine-Free Wolff-Kishner Reaction	1