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Arts, Science and Commerce College, Indapur, Dist. - Pune

TEACHING AND EVALUATION PLAN

Name of the teacher: Prof Bhore J.B.
Semester: I
Year: 2018-2019

Subject: Organic Chemistry
CHO-102
Class: F.Y.B.Sc.

Part I : Teaching Plan
Part II : Evaluation of Plan

1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	July2019	3&4	11	04	Fundamentals of Organic Chemistry .	4	Fundamentals of Organic Chemistry .	Nil	--
2	Aug 2019		11	04	Reactive Intermediates: Carbocations, Carbanions and free radicals. Strength of organic acids and bases:	4	Reactive Intermediates: Carbocations, Carbanions and free radicals. Strength of organic acids and bases:	Nil	--
3	Aug 2019	3&4	11	04	Conformations with respect to ethane, butane and cyclohexane.	4	Conformations with respect to ethane, butane and cyclohexane.	Nil	--
	Sept 2019	1&2	11	04	Aliphatic Hydrocarbons Functional group .	4	Aliphatic Hydrocarbons Functional group	Nil	--
	Sept 2019	3&4	11	04	**Alkenes:**Carbons)*Preparation:* Elimination reactions: Dehydration of alkenes	3	**Alkenes:** Carbons)*Preparation:* Elimination reactions: Dehydration of alkenes	Nil	-
	Oct.2019	1&2	11	04	(alk. KMnO4) and trans-addition (bromine), Addition of HX (Markownikoff's and anti-Markownikoff's addition), Hydration, Ozonolysis, oxymecuration-demercuration, Hydroboration-oxidation.	4	(alk. KMnO4) and trans-addition (bromine), Addition of HX (Markownikoff's and anti-Markownikoff's addition), Hydration, Ozonolysis, oxymecuration-demercuration, Hydroboration-oxidation.	Nil	-
	Oct. 2019	3&4	11	04	Alkynes-	4	Alkynes:	Nil	-
	Nov.2019	1&2	11	04	*Reactions:* formation of metal acetylides, addition of bromine and alkaline KMnO4, ozonolysis and oxidation with hot alk. KMnO4.	2	*Reactions:* formation of metal acetylides, addition of bromine and alkaline KMnO4, ozonolysis and oxidation with hot alk. KMnO4.	Nil	-

Sign. of Teacher

Sign. of Head of Department

Head
Dept. Of Chemistry
Arts, Science & Commerce
College, Indapur, Dist. Pune

Sign. of Faculty In-charge

Sign. of the Principal

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TEACHING AND EVALUATION PLAN

Name of the teacher: Prof Bhore J.B.				Semester: II			Year: 2018-2019		
Subject: Organic Chemistry				CHO-333			Class: T.Y.B.Sc.		
Part I : Teaching Plan				Part II : Evaluation of Plan					
1	2	3	4	5	6	7	8	9	10
Sr. No.	**Month**	**Week**	**No. of working days**	**No. of periods available**	**Topics to be taught**	**No. of periods engaged**	**Topics taught**	**Deviation in periods**	**Remarks**
1	July2018	3&4	7	04	Strength of organic acids and bases (03) Introduction,*p*ka, origin of acidity, influence of solvent, simple aliphatic saturated and unsaturated acids,	04	Strength of organic acids and bases (03) Introduction,*p*ka, origin of acidity, influence of solvent, simple aliphatic saturated and unsaturated acids,	Nil	-
1	Aug 2018	1&2	11	08	2. Stereochemistry of disubstituted cyclohexane 1,1-alkyl disubstituted cyclohexane; Dimethyl cyclohexane 1,2; 1,3 and 1,4.Geometrical isomerism, Optical isomerism, stability of conformation, energy 3. Nucleophilic substitution at aliphatic Carbon SN1 reaction: Kinetics, mechanism and stereochemistry SN2 reaction: Kinetics, mechanism & stereochemistry (inversion).	08	2. Stereochemistry of disubstituted cyclohexane 1,1-alkyl disubstituted cyclohexane; Dimethyl cyclohexane 1,2; 1,3 and 1,4.Geometrical isomerism, Optical isomerism, stability of conformation, energy 3. Nucleophilic substitution at aliphatic Carbon SN1 reaction: Kinetics, mechanism and stereochemistry SN2 reaction: Kinetics, mechanism & stereochemistry (inversion).	Nil	-
2	Aug 2018	3&4	11	08	Ozonolysis (formation of aldehydes & ketones) addition of Hydrogencyanide, alcohols, thiols, water, ammonia derivatives, Cannizzaro and Reformaski reactions	08	Ozonolysis (formation of aldehydes & ketones) addition of Hydrogencyanide, alcohols, thiols, water, ammonia derivatives, Cannizzaro and Reformaski reactions	Nil	-
3	Sept 2018	1&2	11	08	5. Elimination Reactions (06) Introduction; 1,1; 1,2 elimination.E1, E2 and E1cB mechanism with evidences, Hoffmann andSaytzeff's elimination, reactivity effect of structure, attacking and leaving groups.	08	5. Elimination Reactions (06) Introduction; 1,1: 1,2 elimination,E1, E2 and E1cB mechanism with evidences, Hoffmann andSaytzeff's elimination, reactivity effect of structure, attacking and leaving groups.	Nil	-
	Sept 2018	3&4	11	08	6. Aromatic Electrophilic and Nucleophilic substitution reactions (10) Introduction, arenium ion mechanism, Effect of substituent group (Orientation, o/p directing andmeta directing groups activating and deactivating groups)	08	6. Aromatic Electrophilic and Nucleophilic substitution reactions (10) Introduction, arenium ion mechanism, Effect of substituent group (Orientation, o/p directing andmeta directing groups activating and deactivating groups)	Nil	-
	Oct.2018	1&2	11	08	Mechanism of – Nitration, Sulfonation, Halogenation, Fridel-Crafts reactions, Diazo Couplingreactions, Ipso-substitution.Addition-elimination (SNAr),	08	Mechanism of – Nitration, Sulfonation, Halogenation, Fridel-Crafts reactions, Diazo Couplingreactions, Ipso-substitution.Addition-elimination (SNAr),	Nil	-
	Oct. 2018	3&4	11	08	SN1, Elimination-addition (Benzyne)	08	SN1, Elimination-addition (Benzyne)	Nil	-
	Nov. 2018	1&2	11	04	SNR1reactions, reactivity	04	SNR1reactions, reactivity	Nil	-

Sign. of Teacher **Sign. of Head of Department** **Sign. of Faculty In-charge** **Sign. of the Principal**

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TEACHING AND EVALUATION PLAN

Name of the teacher: Prof Bhore J.B. Year: 2018-2019
Semester: II
Subject: Organic Chemistry CHO-202 Class: F.Y.B.Sc.
Part I : Teaching Plan Part II : Evaluation of Plan

1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Dec. 2018	3&4	7	02	Aromatic hydrocarbons Electrophilic substitution	02	Aromatic hydrocarbons Electrophilic substitution:	Nil	-
1	Jan. 2019	1&2	11	04	Alkyl and Aryl Halides **Aryl Halides** *Preparation:* (Chloro, bromo and iodo-benzene case): from phenol	4	Alkyl and Aryl Halides **Aryl Halides** *Preparation:* (Chloro, bromo and iodo-benzene case): from phenol	Nil	-
2	Jan. 2019	3&4	11	04	Sandmeyer & Gattermann reactions.	4	Sandmeyer & Gattermann reactions.	Nil	-
3	Feb. 2019	1&2	11	04	**Alcohols, Phenols and Ethers** **Alcohols:** *Preparation. Reactions:*	4	**Alcohols, Phenols and Ethers** **Alcohols:** *Preparation. Reactions:*	Nil	-
	Feb. 2019	3&4	11	04	**Phenols:** *Preparation:. Reactions:* Electrophilic substitution:	4	**Phenols:** *Preparation:. Reactions:* Electrophilic substitution:	Nil	-
	March 2019	1&2	11	04	**Ethers (aliphatic and aromatic):** Cleavage of ethers with HI. **Aldehydes and ketones (aliphatic and aromatic):** (Formaldehye, acetaldehyde, acetone and benzaldehyde)	3	**Ethers (aliphatic and aromatic):** Cleavage of ethers with HI. **Aldehydes and ketones (aliphatic and aromatic):** (Formaldehye, acetaldehyde, acetone and benzaldehyde)	Nil	-
	March .2019	3&4	11	04	*Preparation:* Aldol Condensation, Cannizzaro's reaction,	4	*Preparation:* Aldol Condensation, Cannizzaro's reaction,	Nil	-
	April 2019	1&2	11	04	Wittig reaction, Benzoin condensation. Clemenson reduction and Wolff Kishner reduction.	4	Wittig reaction, Benzoin condensation. Clemenson reduction and Wolff Kishner reduction.	Nil	-
	April .2019	3	6	02	Meerwein-Pondorff Verley reduction	2	Meerwein-Pondorff Verley reduction	Nil	-

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TEACHING AND EVALUATION PLAN

Name of the teacher: Prof Bhore J.B.					Semester: II		Year: 2018-2019		
Subject: Organic Chemistry					CHO-343		Class: T.Y.B.Sc.		
Part I : Teaching Plan					Part II : Evaluation of Plan				
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Dec. 2018	3&4	7	04	Carbanions and their reactions Introduction, Formation and stability of Carbanion. Reactions involving carbanions	03	Carbanions and their reactions Introduction, Formation and stability of Carbanion. Reactions involving carbanions	Nil	-
1	Jan. 2019	1&2	11	08	mechanisms: applications of Malonic ester, Acetoacetic ester and Wittig reagent. 2. Retrosynthetic analysis and applications Introduction,		mechanisms: applications of Malonic ester, Acetoacetic ester and Wittig reagent. 2. Retrosynthetic analysis and applications Introduction,	Nil	-
2	Jan. 2019	3&4	11	08	3. Rearrangement reactions Introduction, Mechanism of rearrangement reaction involving carbocation, 4. Spectroscopic methods in structure determination of Organic compounds Types of spectroscopy and advantages of spectroscopic methods. A) Ultra Violet Spectroscopy	08	3. Rearrangement reactions Introduction, Mechanism of rearrangement reaction involving carbocation, 4. Spectroscopic methods in structure determination of Organic compounds Types of spectroscopy and advantages of spectroscopic methods. A) Ultra Violet Spectroscopy	Nil	-
3	Feb. 2019	1&2	11	08	B) Infra red Spectroscopy Introduction, Principle of IR Spectroscopy, Fundamental modes of vibrations (3N-6, 3N- absorption of functional groups:	08	B) Infra red Spectroscopy Introduction, Principle of IR Spectroscopy, Fundamental modes of vibrations (3N-6, 3N- absorption of functional groups:	Nil	-
	Feb. 2019	3&4	11	08	Factors affecting on IR absorption: Inductive effect, . PMR Spectroscopy Introduction,	08	Factors affecting on IR absorption: Inductive effect, . PMR Spectroscopy Introduction,	Nil	-
	March 2019	1&2	11	08	Measurement of chemical shift, delta and Tau-scales. TMS as reference and its advantages, peak area, integration, spin-spin coupling, coupling constants, J-value	08	Measurement of chemical shift, delta and Tau-scales. TMS as reference and its advantages, peak area, integration, spin-spin coupling, coupling constants, J-value	Nil	-
	March .2019	3&4	11	08	Problems based on U.V., I.R. and PMR	08	Problems based on U.V., I.R. and PMR	Nil	-
	April 2019	1&2	11	08	Problems based on U.V., I.R. and PMR	08	Problems based on U.V., I.R. and PMR	Nil	-

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