

LESSON PLAN FOR EVEN SEM
SESSION 2017-18

NAME OF ASSISTANT PROFESSOR :Ms. Kajal Kamboj
CLASS : M.Sc(Final)
SUBJECT :Organic Chemistry(Day-4,6)

UNIT/PART I	TOPIC	
	THEORY	PRACTICAL
DAY1 DATE 4-1-18	Introduction and historical perspective, chemical and biological catalysis	.....
DAY2 DATE 6-1-18	Remarkable properties of enzymes like catalytic power	.....
DAY3 DATE 11-1-18	Properties of enzymes like specificity and regulation.	.....
DAY4 DATE 13-1-18	Nomenclature and classification, extraction and purification.(Enzymes)	.....
DAY5 DATE 18-1-18	Fischer's lock and key and Koshland's induced fit hypothesis	.....
DAY6 DATE 20-1-18	Concept and identification of active site by the use of inhibitors.	.....
DAY7 DATE 25-1-18	Affinity labeling. Enzyme kinetics.	.....
DAY 8 DATE 27-1-18	Michaelis-Menten and Lineweaver-Burk plot	.....
UNIT/PART II	TOPIC	
	THEORY	PRACTICAL
DAY1 DATE 1-2-18	Reversible and irreversible inhibition	.....
DAY2 DATE 3-2-18	Mechanism of Enzyme Action ,Transition-state theory, orientation and steric effect	.....
DAY3 DATE 8-2-18	Acid-base catalysis, covalent catalysis, strain or distortion	.....
DAY4 DATE 10-2-18	HOLIDAY	
DAY5 DATE 15-2-18	Mechanism of action of carboxypeptidase A and papain Mechanism of action of chymotrypsin, carboxypeptidase A	.....
DAY6 DATE 17-2-18	Sessional I	.
DAY7 DATE 22-2-18	Cofactors as derived from vitamins Prosthetic groups, apoenzymes	.....
UNIT/PART III	TOPIC	
	THEORY	PRACTICAL
DAY1 DATE 24-2-18	Structure and biological functions of coenzyme A	.....
DAY2 DATE 1-3-18	HOLIDAY	HOLIDAY
DAY3 DATE 8-3-18	Structure and biological functions of Thiamine pyrophosphate, pyridoxal phosphate	.....

DAY4 DATE 10-3-18	ASSIGNMENT 2	
DAY5 DATE 15-3-18	Structure and biological functions of NAD ⁺ , NADP ⁺
DAY6 DATE 17-3-18	Structure and biological functions of FMN, FAD.	.....
DAY7 DATE 22-3-18	Biological functions of coenzymes.	.....
DAY 8 DATE 24-3-18	Biological functions of Co-factors	.....
UNIT/PART IV	TOPIC	
	THEORY	PRACTICAL
DAY1 DATE 29-3-18	HOLIDAY	HOLIDAY
DAY2 DATE 31-3-18	Mechanisms of reactions catalyzed by the above cofactors	.....
DAY3 DATE 5-4-18	Nomenclature of prostaglandins.	.....
DAY4 DATE 7-4-18	Biological roles of prostaglandin	.....
DAY5 DATE 12-4-18	Biological functions of Co-factors.	.....
DAY6 DATE 14-4-18	HOLIDAY	HOLIDAY
DAY7 DATE 19-4-18	Synthesis of PGE ₂ and PGF _{2α}	.....

NAME OF ASSISTANT PROFESSOR : Ms. Kajal Kamboj
CLASS/SECTION: : M.Sc (Previous)
SUBJECT: : Chemistry Practical(Day-1)

	THEORY	PRACTICAL
DAY1 DATE 1-1-18	.....	Two Step Organic Preparation-I
DAY2 DATE 8-1-18	.....	Two Step Organic Preparation-II
DAY3 DATE 15-1-18	.....	Two Step Organic Preparation-III
DAY4 DATE 22-1-18	HOLIDAY	HOLIDAY
DAY5 DATE 29-1-18	.....	Two Step Organic Preparation-IV
DAY6 DATE 5-2-18	.....	Two Step Organic Preparation-V
DAY7 DATE 12-2-18	.....	Mixture Analysis
DAY8 DATE 19-2-18	Sessional I	Mixture Analysis
DAY9 DATE 26-2-18	.....	Mixture Analysis

DAY10 DATE 5-3-18	.....	Mixture Analysis
DAY 11 DATE 12-3-18	.....	Mixture Analysis
DAY12 DATE 19-3-18	.....	Mixture Analysis
DAY13 DATE 26-3-18	.....	Mixture Analysis
DAY14 DATE 2-4-18	.....	Mixture Analysis
DAY15 DATE 9-4-18	.....	Mixture Analysis
DAY16 DATE 16-4-18	.....	Mixture Analysis

NAME OF ASSISTANT PROFESSOR
CLASS/SECTION
SUBJECT

:Ms. Kajal Kamboj
: B.Sc IInd
:Organic Chemistry(Day -2,3,4)

UNIT/PART I	TOPIC	
	THEORY	PRACTICAL
DAY1 DATE 2-1-18	.....	Gravimetric Analysis: Al ³⁺ as oxinate
DAY2 DATE 3-1-18	Amines:-Structure and nomenclature of amines,Physical properties.	Gravimetric Analysis: Al ³⁺ as oxinate
DAY3 DATE 4-1-18	Separation of a mixture of primary, secondary and tertiary amines. Structural features affecting basicity of amines.	.....
DAY4 DATE 9-1-18	.....	Gravimetric Analysis: Al ³⁺ as oxinate
DAY5 DATE 10-1-18	Preparation of alkyl and aryl amines (reduction of nitro compounds, nitriles, reductive amination of aldehydic and ketonic compounds	Gravimetric Analysis: Al ³⁺ as oxinate
DAY6 DATE 11-1-18	Gabriel-phthalimide reaction, Hofmann bromamide reaction	.....
DAY 7 DATE 16-1-18	.....	Identification of organic compound
DAY8 DATE 17-1-18	Electrophilic aromatic substitution in aryl amines, reactions of amines with nitrous acid	Identification of organic compound
DAY9 DATE 18-1-18	Infrared (IR) absorption spectroscopy: Molecular vibrations, Hooke's law, selection rules, intensity and position of IR	

	bands	
DAY10 DATE 23-1-18	SPORTS DAY	SPORTS DAY
DAY11 DATE 24-1-18	HOLIDAY	HOLIDAY
DAY12 DATE 25-1-18	Measurement of IR spectrum, fingerprint region	.....
UNIT/PART II	TOPIC	
	THEORY	PRACTICAL
DAY1 DATE 30-1-18	.....	identification of organic compound
DAY2 DATE 31-1-18	HOLIDAY	HOLIDAY
DAY3 DATE 1-2-18	Characteristic absorptions of various functional groups	.....
DAY4 DATE 6-2-18	.....	identification of organic compound
DAY5 DATE 7-2-18	Interpretation of IR spectra of simple organic compounds	identification of organic compound
DAY6 DATE 8-2-18	Applications of IR spectroscopy in structure elucidation of simple organic compound.	.....
DAY7 DATE 13-2-18	HOLIDAY	HOLIDAY
DAY8 DATE 14-2-18	Diazonium Salts -Mechanism of diazotisation, structure of benzene diazonium chloride	identification of organic compound
DAY9 DATE 15-2-18	I R Examples and their problems.	.....
DAY10 DATE 20-2-18	.....	identification of organic compound
DAY11 DATE 21-2-18	Replacement of diazo group by H, OH, F, Cl, Br, I, NO ₂ and CN groups	identification of organic compound
DAY12 DATE 22-2-18	Reduction of diazonium salts to hyrazines .	.....
UNIT/PART III	TOPIC	
	THEORY	PRACTICAL
DAY1 DATE 27-2-18	CLASS TEST (IR SPECTROSCOPY)	identification of organic compound
DAY2 DATE 28-2-18	HOLIDAY	HOLIDAY
DAY3 DATE 1-3-18	HOLIDAY	HOLIDAY
DAY4 DATE 6-3-18	.....	identification of organic compound
DAY5 DATE 7-3-18	Coupling reaction and its synthetic application	identification of organic compound
DAY6 DATE 8-3-18	Aldehydes and Ketones: Nomenclature and structure of the carbonyl	.....

	group	
DAY7 DATE 13-3-18	.....	identification of organic compound
DAY8 DATE 14-3-18	Synthesis of aldehydes and ketones with particular reference to the synthesis of aldehydes from acid chlorides	identification of organic compound
DAY9 DATE 15-3-18	Advantage of oxidation of alcohols with chromium trioxide (Sarett reagent) pyridinium chlorochromate (PCC) and pyridinium dichromate.	.....
DAY10 DATE 20-3-18	.....	identification of organic compound
DAY11 DATE 21-3-18	CONDITIONAL TEST	
DAY12 DATE 22-3-18	CONDITIONAL TEST	
UNIT/PART IV	TOPIC	
	THEORY	PRACTICAL
DAY1 DATE 27-3-18	.....	identification of organic compound
DAY2 DATE 28-3-18	Comparison of reactivities of aldehydes and ketones and their physical properties	identification of organic compound
DAY3 DATE 29-3-18	HOLIDAY	HOLIDAY
DAY4 DATE 3-4-18	.....	identification of organic compound
DAY5 DATE 4-4-18	Mechanism of nucleophilic additions to carbonyl group with particular emphasis on benzoin, aldol condensation.	identification of organic compound
DAY6 DATE 5-4-18	Perkin and Knoevenagel condensations. Wittig reaction. Mannich reaction	.....
DAY7 DATE 10-4-18	.....	identification of organic compound
DAY8 DATE 11-4-18	Condensation with ammonia and its derivatives	identification of organic compound
DAY9 DATE 12-4-18	Oxidation of aldehydes, Baeyer–Villiger oxidation of ketones, Cannizzaro reaction.	.....
DAY10 DATE 17-4-18	.....	identification of organic compound
DAY11 DATE 18-4-18	HOLIDAY	HOLIDAY
DAY12 DATE 19-4-18	MPV, Clemmensen, Wolff-Kishner, LiAlH ₄ and NaBH ₄ reductions.	.....

NAME OF ASSISTANT PROFESSOR
CLASS/SECTION
SUBJECT

: Ms. Kajal Kamboj
: B.Sc Ist
: Practical(Day-2,5,6)

	THEORY	PRACTICAL
DAY1 DATE 2-1-18	.....	Volumetric Analysis Preparation of reference solutions
DAY2 DATE 5-1-18	.....	Volumetric Analysis Preparation of reference solutions
DAY3 DATE 6-1-18	.....	Volumetric Analysis Preparation of reference solutions
DAY4 DATE 9-1-18	.....	Redox titrations
DAY5 DATE 12-1-18	.....	Redox titrations
DAY6 DATE 13-1-18	.....	Redox titrations
DAY 7 DATE 16-1-18	.....	Determination of Fe ²⁺ Using KMnO ₄
DAY8 DATE 19-1-18	.....	Determination of Fe ²⁺ Using KMnO ₄
DAY9 DATE 20-1-18	.....	Determination of Fe ²⁺ Using KMnO ₄
DAY10 DATE 23-1-18	SPORTS DAY	SPORTS DAY
DAY11 DATE 24-1-18	HOLIDAY	HOLIDAY
DAY12 DATE 26-1-18	HOLIDAY	HOLIDAY
DAY 13 DATE 27-1-18	.....	Determination of Mg ²⁺ by EDTA
DAY14 DATE 30-1-18	.....	Determination of Mg ²⁺ by EDTA
DAY15 DATE 31-1-18	HOLIDAY	HOLIDAY
DAY16 DATE 2-2-18	.....	Determination of Fe ²⁺ (using K ₂ Cr ₂ O ₇)
DAY17 DATE 3-2-18	.....	Determination of Fe ²⁺ (using K ₂ Cr ₂ O ₇)
DAY18 DATE 6-2-18	.....	Determination of Fe ²⁺ (using K ₂ Cr ₂ O ₇)
DAY19 DATE 9-2-18	ASSIGNMENT 1	Complexometric titrations
DAY20 DATE 10-2-18	HOLIDAY	HOLIDAY
DAY21 DATE 13-2-18	HOLIDAY	HOLIDAY
DAY22 DATE 16-2-18	.....	Complexometric titrations
DAY23 DATE 17-2-18	.....	Determination of Zn ²⁺ by EDTA
DAY24 DATE 20-2-18	.....	Complexometric titrations

DAY25 DATE 23-2-18	.....	Iodometric titrations
DAY26 DATE 24-2-18	.....	Iodometric titrations
DAY27 DATE 27-2-18	.....	Determination of Zn ²⁺ by EDTA
DAY28 DATE 28-2-18	HOLIDAY	HOLIDAY
DAY29 DATE 1-3-18	HOLIDAY	HOLIDAY
DAY30 DATE 2-3-18	HOLIDAY	HOLIDAY
DAY31 DATE 3-3-18	HOLIDAY	HOLIDAY
DAY32 DATE 6-3-18	.....	complexometric titrations
DAY33 DATE 9-3-18	.....	Determination of Cu ²⁺ (using standard hyposolution).
DAY34 DATE 10-3-18	ASSIGNMENT 2	Determination of Cu ²⁺ (using standard hyposolution).
DAY35 DATE 13-3-18	.....	Iodometric titrations
DAY36 DATE 16-3-18	.....	Iodometric titrations
DAY37 DATE 17-3-18	.....	Iodometric titrations
DAY38 DATE 20-3-18	.....	Determination of Cu ²⁺ (using standard hyposolution).
DAY 39 DATE 23-3-18	HOLIDAY	HOLIDAY
DAY 40 DATE 24-3-18	.....	Melting point determination.
DAY41 DATE 27-3-18	.....	Determination of Cu ²⁺ (using standard hyposolution).
DAY42 DATE 29-3-18	HOLIDAY	HOLIDAY
DAY43 DATE 30-3-18	.....	To determine the specific refractivity
DAY44 DATE 31-3-18	.....	To determine the specific refractivity
DAY45 DATE 3-4-18	.....	Melting point determination.
DAY46 DATE 6-4-18	.....	To determine the specific refractivity
DAY47 DATE 7-4-18	.....	To determine the specific refractivity
DAY48 DATE 10-4-18	.....	To determine the specific refractivity
DAY49 DATE 13-4-18	.....	To determine the specific refractivity

DAY50 DATE 14-4-18	HOLIDAY	HOLIDAY
DAY51 DATE 17-4-18	.....	To determine the specific refractivity.
DAY52 DATE 18-4-18	HOLIDAY	HOLIDAY
DAY53 DATE 20-4-18	.....	To determine the specific refractivity