RG	GPV (Dipl	oma Wing) Bhopal	SCHEME F	OR LEARNING		Bran	ch (Code		Cours	se C	Code	CO Code	LO Code	Format No. 4
	` I	87 I	OU	ICOME		C	0	2		3	0	1	1	1	
CO NA	URSE AME	APPLIED CHEMISTRY	FOR CHEMICAL ENGINEERI	NG.	I	I									
CO Des	scription	To recognize single	component, bicomponent a	and multicomponer	nt systei	ns.									
LO Des	scription	To apply phase rule.													
	-			SCHEME O	F STU	DY									
S. No.	Lea	rning Content	Teaching –Learning Method	Description of Process	f T-L	Teach Hrs.	1	Prac /Tut H	et. Irs.		LF	Rs Re	quired		Remarks
1	Statemen concept compone freedom rule to Water system, phase ru KI-water lead sys degrees simple sy	nt of phase rule, of phase, ent and degree of , application of phase single component system and sulfur application of le to two component and silver stem, calculation of of freedom for ystems.	Interactive classroom teaching, demonstration, quiz, assignments, tutorial.	Teacher will exp the contents and provide handout students. Teache conduct assignn quiz/tutorial to n students practice knowledge.	plain l ts to er will nents/ make e their	5		1		Hai PP7	ndo Γ, te	uts, c ext bo	halk boa ook, lab	rd,	
			1	SCHEME OF A	SSESS	MENT	•								
S. No.	Metł	od of Assessment	Description of A	Assessment	Max M	kimum arks]	Resou	rce	es Ree	quired		External / Internal
1	Pen Pape	r test/Theory Exam	Student will be explain phase r applicati	e asked to ule and its on.		10	(1	Test pa	iper on p	+ Rat aper +	ing -Ra	scale ting s) and cale)		Internal
			ADDITIONAL INST	RUCTIONS FO	R THE	HOD/	FA	CULT	Y (.	IF AN	VY)				· · · · · · · · · · · · · · · · · · ·
				Ni	1						-				

R	GPV (Dipl	oma Wing) Bhopa	1	SCHEME	FOR LEARNIN	G B	an	ch Co	ode		Cou Coc	rse le	CO Code	LO Code	Format No. 4
	· -			0	UTCOME	C		0	2	3	0	1	1	2	
	URSE AME	APPLIED CHEMISTR	Y FOR CH	IEMICAL ENGINEER	RING	· · · ·							·	·	
CO Des	scription	To recognize single	compon	ent, bi component	and multi compone	ent systems.									
LO Des	scription	To apply the conditi	ons favo	rable for equilibriu	im to focus on high	yield of produ	cts.								
		1			SCHEME O	F STUDY									
S. No.	Lear	rning Content	Teacl	hing –Learning Method	Description of	T-L Process		Tea H	ach rs.		Pra Tut	ct. Hrs.	LF	Rs Requir	ed Remarks
1	Introduction equilibrium chemical en mass action of equilibri dynamic na chemical en affecting en constant, L	on to chemical n, physical and quilibrium, laws of n, concept um constant, ature of quilibrium, factors quilibrium e chatelliers principle	Interaction teachin demor assign tutoria demor on pra	ctive classroom ng, nstration, quiz, ments, 1. lab nstration, hands ctice	Teacher will exp contents and pro- to students. Teac conduct assignm quiz/tutorial to r practice their km Teacher will con assignments to r practice their km Teacher will der procedure of lab	blain the ovide handout cher will nents/ nake students owledge. nduct lab nake students owledge. nonstrate the o experiments.	5	5		2			Hando board, book.	uts, chalk PPT, text	
					SCHEME OF A	SSESSMEN'	Г								
S. No.	Metho	od of Assessment		Description of A	Assessment	Maximum Marks				Res	sourc	es R	equired		External / Internal
1	Pen Paper	test/Theory Exam	Stud chen laws	ent will be asked nical equilibria an	to explain d related	10		(Test (Ques	paper tion	r + F pape	Rating er +R	g scal ating	e) and scale)		External
			ADD	ITIONAL INST	RUCTIONS FO	R THE HOD	/ F	ACU	LTY	(IF	ANY)			
					Nil										

RGP	V (Diplom	a Wing) Bhopal	SCHEME FOI OUTC	R LEARNING COME	Bran	ch Coo	de	C	ourse Co	ode	CO Code	LO Cod	e Format No.
					С	0	2	3	0	1	1		3
	URSE AME	APPLIED CHEMISTR	Y FOR CHEMICAL ENGINE	ERING			-	1				-	
CO Des	scription	To recognize single	component, bi componer	nt and multi compone	ent systems.								
LO Des	scription	Prepare solutions a	pplying principles of ionic	equilibria.									
				SCHEME	OF STUD	Y							
S. No.	Lea	rning Content	Teaching – Learning Method	Description of T-L Process		Tea	ach H	rs.	Pract. /Tut Hrs.		LRs Req	uired	Remarks
1	lonic equ strong elec ionization common ion effect, theory, def calculation solution, u Nernst dist explanatio limitations	uilibrium, theory of strolytes, of acid and bases, debye huckles finition and of PH, Buffer se of indicators, sribution low : n and	Interactive classroom teaching, demonstration, quiz, assignments, tutorial Lab assignments, presentation, lab demonstration, hands on practice.	Teacher will expla contents and prov handouts to studen Teacher will cond assignments/ quiz to make students p their knowledge. T will conduct lab assignments to ma students practice to knowledge. Teacher will demo procedure of lab experiments.	ain the ide nts. luct /tutorial practice Teacher ake their	03			04	H bo la	Iandouts, ch oard, charts ıb.	alk , ,	
				SCHEME OF	ASSESSN	1ENT							
S. No.	Meth	od of Assessment	Description of	f Assessment	Maximu Marks	ım S			Resour	ces R	equired		External / Internal
1	Pen Paper Exam/pra	test/Theory ctical Exam	Student will be aske explain ionic equilib perform related exp	ed to oria and eriment	10		(Test p (Quest scale f	aper - ion pa or pra	⊢ Rating per +Rat cticals	scale) ting sc	/ cale) and rat	ing	External
			ADDITIONAL I	NSTRUCTIONS F	OR THE I	HOD/	FACU	LTY	(IF ANY	Z)			
			Nil										

F	RGPV (Dip	loma Wing) Bhop	al	SCHEME	E FOR LEARNIN	NG Bra	nch	Code		Cours	se Co	de	CO Code	LO Code	Format No. 4
				U	UICOME	С	0	2		3	0	1	2	1	
CO NA	URSE AME	APPLIED CHEMIST	RY FOR CH	EMICAL ENGINI	EERING										
CO De	scription	To interrelate prop	erties and	physical behavi	or of colloids and s	olutions.									
LO De	scription	To prepare list of ch	naracteristi	ics of colloids th	nat distinguish it fro	om solutions									
					SCHEME (OF STUDY									
S. No.	Lear	ning Content	Teachi I N	ng – Learning Method	Description of Process	T-L	Te H	ach rs.		Pract /Tut Hrs.	•	Ι	LRs Req	uired	Remarks
1	Colloids, preparation of coll properties solutions, protective and ge of colloids	classification, n and purification loidal solution, of colloidal concept of colloids, emulsion els, application	Interacti teaching demonst assignm lab demo	ve classroom , ration, quiz, ents, tutorial. onstration	Teacher will exp contents and pro handouts to stud Teacher will con assignments/ qui to make students their knowledge. will conduct lab assignments to m students practice knowledge.	olain the vide ents. iduct iz/tutorial s practice . Teacher nake e their	05		0.	3	H bu bu	anc oar ook	louts, ch d, PPT, t , lab	alk ext	
			1		SCHEME OF A	ASSESSMEN	T							I	
S. No.	Metho	od of Assessment	D	escription of	Assessment	Maximu Marks	n			Reso	urces	Re	quired		External / Internal
1	Pen Paper Exam/prac	test/Theory ctical Exam	Student colloida same.	will be asked al solutions an	to describe d prepare the	10	(* () S(Fest p Quest cale f	paper tion pr	r + Ra paper ractica	ting s +Rati ls	cale	e)/ scale) an	d rating	Internal
			ADDIT	IONAL INST	TRUCTIONS FO	R THE HO	D/ FA	CUL	LTY	(IF A	NY)				
					N	il									

R	SPV (Diplo	oma Wing) Bhopa	SCHEME FOR	LEARNIN(G B	ranch (Code	Co	ourse	e Code	CO Code	LO Code	Format No. 4
		87 I	OUTC	OME	С	0	2	3	0) 1	2	2	-
	URSE ME	APPLIED CHEMISTR	Y FOR CHEMICAL ENGINEERING	G.			I				-		-
CO De	scription	To interrelate prope	erties and physical behavior of	colloids and so	olutions								
LO Des	scription	To prepare standar	d solutions and explain behav	ioral changes c	f solution f	rom pur	e compo	onent	•				
				SCHEME O	F STUDY	7							
S. No.	Lear	ning Content	Teaching –Learning Method	Descriptio Proc	n of T-L ess	Teach Hrs.	n Pra /T Hi	act. 'ut rs.		LRs l	Required		Remarks
1	Types o expression concentra gases colligative Raoults lowering boiling and depressio osmotic p of properties molecular	of solutions and n of ition, solubility of in liquids, e properties, law and relative of vapor pressure, point elevation freezing point n, osmosis and ressure, application colligative s to determine	Interactive classroom teaching, demonstration, quiz, assignments, tutorial. lab demonstration	Teacher will the contents provide han students. Te will conduc assignments quiz/tutorial students pra their knowle Teacher will lab assignm make studen practice the knowledge	l explain and douts to eacher t t d to make ctice edge. l conduct ents to nts ir	07	05		Ha bo lat	andouts oard, PP b.	, chalk T, text bo	ook,	
			SC	HEME OF A	SSESSMI	ENT							
S. No.	Metho	od of Assessment	Description of Asse	essment	Maxim Mark	um s		Re	esoui	rces Re	quired		External / Internal
1	Pen Pape Exam/prac	er test/Theory ctical Exam	Student will be asked to c different types of solution prepare the same.	describe is and	10	(* ((S(Test pap Questio cale for	per + n pap pract	Rati per + ticals	ng scale Rating s	e)/ scale) and	l rating	External
			ADDITIONAL INSTRU	CTIONS FO	R THE H	OD/ FA	CULT	Y (II	FAN	NY)			
				Ni	1								

R	GPV (Dir	oloma Wing) Bhon	al	SCHEM	E FOR LEARN	ING	Bra	nch C	ode	Cour	se C	ode	CO Code	LO Code	Format No. 4
		F		(JUTCOME		С	0	2	3	0	1	3	1	
CO NA	URSE ME	APPLIED CHEMISTR	Y FOR CHEM	1ICAL ENGINEE	RING		1	1		1			1		
CO Des	scription	To explain adsorption	on and its ef	fect on physic	al and chemical c	hanges in s	olids.								
LO Des	scription	To differentiate phy	sisorption a	nd chemisorp	tion.										
		1			SCHEME	OF STU	DY								
S. No.	Lea	rning Content	Tea Lea M	ching — arning ethod	Descrip P	tion of T rocess	·L	T]	'each Hrs.	Pra /Tu Hr	nct. ut rs.		LRs R	equired	Remarks
1	Introducti adsorption between absorption mechanism types of ac physical ar adsorption affecting a gases on so	on to and adsorption, of adsorption, lsorption, d chemical a factors dsorption of plids.	Interacti teaching, demonstr assignme lab demo	ve classroom ration, quiz, ents, tutorial. onstration	Teacher will exp contents andpro handouts to stud Teacher will con assignments/ qu make students p knowledge. Tea conduct lab assis make students p knowledge	plain the vide lents. nduct iz/tutoria oractice th cher will gnments oractice th	to eir o eir	04		02		Ha boa lab	ndouts, ırd, char	chalk rts, ,	
					SCHEME OF	ASSESS	MENT								
S. No.	Meth	od of Assessment	De	escription of	Assessment	Max M	imum arks			Resou	irces	s Req	uired		External / Internal
1	No. Method of Assessment Pen Paper test/Theory . Exam/practical Exam a			will be asked on and apply t	l to describe he same	10		(Tes (Que scale	st pape estion e for p	er + Rat paper - practica	ting s +Rati ls	scale) ing s)/ cale) and	d rating	External
			ADDITI	ONAL INST	TRUCTIONS F	OR THE	HOD/	FACU	ULTY	(IF A)	NY)				
					Part of Exte	ernal Prac	ical								

R	GPV (Dig	oloma Wing) Bhop	al	SCHEME FO	OR LEARNIN	G	Bra	nch C	ode	Co	urse (Code	CO Code	LO Code	Format No. 4
	` •			001	COME		С	0	2	3	0	1	3	2	
COI NA	URSE ME	APPLIED CHEMISTR	Y FOR CHE	MICAL ENGINEERIN	G	I						-	1		
CO Des	scription	To explain adsorption	on and its e	effect on physical ar	nd chemical chan	nges in so	lids.•								
LO Des	cription	To apply principles of	of adsorpti	on in different cond	litions.										
		1			SCHEME O	F STUE	ŊΥ								
S. No.	Lea	rning Content	Teach	ing –Learning Method	Descriptio Proc	on of T-I cess	4	Tea Hr	ch 's.	Pra /T Hi	act. ut rs.]	L Rs Requ	iired	Remarks
1	Adsorptic Freundlic isotherms adsorptio adsorptio	on isotherms, h and Langmuir s, application of n, ion-exchange n.	Interacti teaching quiz, ass tutorial.	ve classroom , demonstration, signments,	Teacher will e contents and p handouts to st Teacher will c assignments/ to make stude their knowled	explain the provide tudents. tudents conduct quiz/tuto ents practige.	ne rial ice	05		02		Hand boar char	douts, cha d, PPT, te ts.	lk ext book,	
				S	CHEME OF A	SSESSN	AEN'	Т							
S. No.	Meth	od of Assessment	Γ	Description of Ass	sessment	Maxi Ma	mum rks	1		Re	sourc	es Re	quired		External / Internal
1	Pen Paper	test/Theory Exam	Studer adsorp	nt will be asked otion isotherms.	to explain	1	0	(T (Q	est pa uestic	per + 1 on pap	Rating er +Ra	g scale ating	e) and scale)		External
	1		ADDI	FIONAL INSTRU	UCTIONS FO	R THE	HOD	/ FAC	CULT	TY (IF	ANY)			1
					Ni	1									

R	RGPV (Dip	ploma Wing) Bhop	al	SCHEME I	FOR LEARNI	NG	Bra	nch	Coc	le	Cou	urse	e Cod	le	CO Code	LO Code	Format No. 4
		1					C	0		2	3	0		1	3	3	
CO NA	URSE ME	APPLIED CHEMISTRY	FOR CHEI	MICAL ENGINEERIN	G.												
CO Des	scription	To explain adsorption	on and its e	ffect on physical ar	nd chemical char	nges in solio	ds										
LO Des	cription	Select appropriate c	atalyst for	different condition	S.												
					SCHEME	OF STUE	DY										
S. No.	Lea	rning Content	Teach	ing –Learning Method	Description Proce	n of T-L ess	Tea Hr	ch s.	P /Tu	ract. ut Hi	s.		LRs	Req	luired		Remarks
1	Crystal ch geometry latice site coordinat crystal, cr defects, p isomorph selectivity catalyst, e	emistry, crystal r, space lattice, s and tion number, types of rystal polymorphism and ism, catalyst activity, y of enzyme catalysis	Interacti teaching quiz, ass tutorial.	ve classroom , demonstration, ignments,	Teacher will of the contents a provide hando students. Tea conduct assig quiz/tutorial t students pract knowledge.	explain and outs to cher will gnments/ to make tice their	05		02		I	Han PPT	douts	s, ch boo	alk board ok, charts	d, s.	
				<u>e</u>	SCHEME OF	ASSESS	AEN T	•									
S. No.	Meth	od of Assessment	E	Description of Ass	sessment	Maxi Ma	mum rks				Res	soui	ces l	Req	uired		External / Internal
1	Pen Paper	test/Theory Exam	Studer crystal	nt will be asked lography.	describe	1	0	((Tes (Que	t pap estion	er + R 1 pape	Ratii er +1	ng sca Ratin	ale) g sc	and ale)		External
			ADD	TIONAL INSTR	RUCTIONS F	OR THE I	HOD/	FA	CUI	LTY	(IF A	NY)				
					Ν	Nil											

RC	GPV (Diplo	oma Wing) Bhopal	SCHEME FOR L	EARNING	Br	anch (Code	Co	urse (Code	CO Code	LO Code	Format No. 4
	× 1	0 / 1	OUTCOM	VIE	С	0	2	3	0	1	4	1	
CO NA	URSE AME	APPLIED CHEMISTRY	FOR CHEMICAL ENGINEERING		I	1							
CO De	scription	To classify different ty	pes of hydrocarbons based o	n their properti	es and stru	ucture.							
LO Des	scription	To classify organic co	npounds.										
				SCHEME O	F STUDY	Y							
S. No.	Lear	ming Content	Teaching – Learning Method	Descriptio Proc	on of T-L cess		Teac h Hrs.	Pra /T Hi	act. ut rs.]	LRs Requ	uired	Remarks
1	Organic che valancy of Unsaturatio reason for l compounds and structu chain, funct isomerism, compounds IUPAC nom compounds	emistry of hydrocarbons carbon atoms. on in carbon compound huge number of organic s, empirical, molecular iral formula, isomerism, tional and position classification of organic s, homologous series, ienclature of organic	 s, Interactive classroom teaching, s, demonstration, quiz, assignments, tutorial. 	Teacher will contents and handouts to s Teacher will assignments/ to make stud their knowled	explain the provide students. conduct quiz/tuto ents pract dge.	he orial ice	12	04		Hand boar book film,	douts, cha d, PPT, te c, charts, v virtual la	alk ext video ab.	
	•		SC	HEME OF A	SSESSM	ENT				1			
S. No.	Meth	od of Assessment	Description of Asse	ssment	Maxin Mar	num ks		R	esour	ces R	equired		External / Internal
1	Pen Paper	test/Theory Exam	Student will be asked diversity of organic comp	to explain ounds.	10		(Test (Ques	paper + tion pa	- Ratii per +l	ng sca Rating	le) and scale)		Internal
			ADDITIONAL INSTRU	CTIONS FOR	R THE H	OD/ F	FACUL	TY (II	FAN	Y)			
				Nil									

F	RGPV (Dip	loma Wing) Bho	pal	SCHEM	IE FOR LEARNIN OUTCOME	G Bra	anch C	Code	Cou 3	rse	Code	CO Code	LO Code	Format No. 4
CO NA	URSE ME	APPLIED CHEMIST	RY FOR CHE	MICAL ENGINEE	RING					U		7		
CO Des	scription	To classify differer	nt types of h	ydrocarbons ba	sed on their properties	and structur	e.							
LO Des	cription	To prepare organi	c compound	S										
					SCHEME OF	STUDY								
S. No.	Lear	ming Content	Teachir N	ng –Learning Iethod	Description of T Process	-L	Teac h Hrs]	Pract. /Tut Hrs.			LRs Re	quired	Remarks
1	. Lab prep of Methar Benzene, Diazoxium	arations and uses ne, Acetylene, Toluene, n salt and phenol	Interactiv teaching, demonstra assignmen lab demon	e classroom ation, quiz, nts, tutorial. nstration	Teacher will explain contents and provid to students. Teacher conduct assignment quiz/tutorial to mak practice their knowl Teacher will conduc assignments to mak practice their knowl	n the e handouts r will s/ e students edge. ct lab e students edge	08	06	5		Hand board book, lab.	outs, , PPT, charts,	chalk text	
					SCHEME OF AS	SESSMENT	[
S. No.	Metho	od of Assessment	Ι	Description of	Assessment	Maximu Marks	m		Re	esou	irces	Require	d	External / Internal
1	Pen Paper Exam/prac	test/Theory ctical Exam	Student prepara compou	will be asked tion methods o inds and prepa	to describe of organic re them in lab.	10	(". ((ra	Fest p Quest uting s	aper + 1 ion pap scale fo	Rati er + r pra	ng sc Ratin actica	ale)/ g scale) ls	and	External
	·		ADDI	FIONAL INS	TRUCTIONS FOR	THE HOD/	' FACU	JLTY	(IF A	NY)			·
					Nil									

F	RGPV (Di	ploma Wing) Bhor	oal	SCHEME FO	R LEARNING	g Brai	nch Co	ode	Cou	ırse (Code	CO Code	LO Code	Format No. 4
-		F (8) F		OUT	COME	С	0	2	3	0	1	5	1	
CO NA	URSE AME	APPLIED CHEMISTRY	FOR CHEN	/ICAL ENGINEERING	i									
O De	scription	To apply tested org	anic reacti	ons to prepare new	products.									
O De	scription	to explain role of org	ganic react	ions in synthesis of c	compounds.									
					SCHEME OI	F STUDY								
. No.	Lea	rning Content	Teach	ning –Learning Method	Description Proce	n of T-L ess	Teac Hrs	h •	/ Pract. Hrs	/Tut]	L Rs Requ	iired	Remarks
1	Various fu organic co importano charateris groups	Inctional groups in Impounds . Se and general tics of functional	Interacti teaching quiz, ass tutorial.	ive classroom g, demonstration, signments,	Teacher will e contents and p handouts to st Teacher will c assignments/ quiz/tutorial to students pract knowledge. T conduct lab as to make stude practice their	explain the provide udents. conduct o make ice their eacher will ssignments nts knowledge	05		02		Hand boar char	douts, cha d, PPT, te ts, lab.	lk ext book,	
				SC	CHEME OF AS	SESSMEN	T							
S. No.	Meth	od of Assessment	Γ	Description of Ass	essment	Maximu Marks	n		Re	esour	ces Re	equired		External / Internal
1	Pen Pape Exam/pra	r test/Theory actical Exam	Studer variou practio	nt will be asked to is functional group cal applications.	explain s with their	10	(T (C sc	'est p Juest ale f	paper + tion pap for pract	Ratin per +F ticals	ng scal Rating	e)/ scale) and	l rating	External
			ADDI	TIONAL INSTRU	UCTIONS FOR	THE HO	D/ FA	CUL	LTY (IF	FAN	Y)			
					nil									
			ADDIT	FIONAL INSTRU	U CTIONS FOR nil	THE HO	sc D/ FA	ale f	TOT pract	F AN	Y)			

R	GPV (Dip	oloma Wing) Bhop	al	SCHEME FO	OR LEARNIN COME	NG	Brar	nch C	ode	Cou	rse (Code	CO Code	LO Code	e Format No. 4
COU	JRSE ME	APPLIED CHEMISTR	Y FOR CHE	MICAL ENGINEERING			C	0	2	3	0	1	5	2	
CO Des	cription	To apply tested orgar	nic reaction	ns to prepare new pi	roducts.										
LO Des	cription	Prepare compounds	using fam	ous organic reactior	۱.										
					SCHEME O	F STUDY									
S. No.	Lea	rning Content	Teach	ing –Learning Method	Description Proce	n of T-L ess	Te H	each Irs.	Pi /Tu	ract. t Hrs.		LF	Rs Requi	red	Remarks
1	Types of o Grignard reactions reaction o compoun condonso reduction cannizaro Tolleris re Bromide	organic reactions, reagents and , Friedalcralts organo metallic ds, Aldol ction, clemensim and wurlz reaction, o reaction, eaction, Hofmann reaction.	Interactiv teaching, quiz, ass tutorial.	ve classroom , demonstration, ignments,	Teacher will the contents a provide hand students. Tea conduct assig quiz/tutorial to students prack knowledge. The will conduct assignments to students prack knowledge	explain and outs to cher will gnments/ to make tice their Feacher lab to make tice their	0	8		05		Iando oard, harts,	uts, chalk PPT, text lab.	t book,	
				SC	HEME OF A	SSESSME	NT		1		1				
S. No.	Meth	od of Assessment	D	escription of Asse	essment	Maximu Marks	ım S			Reso	urce	es Re	quired		External / Internal
1	Pen Paper Exam/pra	test/Theory ctical Exam	describe with	10		(Que ratin	(Te estion ig scal	st paper paper e for p	er + +Ra pract	Ratin ting s icals	g scale)/ scale) and	1 E	External/Internal		
			ADDIT	IONAL INSTRU	CTIONS FOI	R THE HO)D /]	FACU	JLTY	(IF A	NY)		I	
					Nil										

Practical List

S.No.	NAME OF EXPERIMENT	CO	LO
1	Determine equilibrium constant for the reaction $KI + I_2 = KI_3$	1	2
2	Determine pH value of some solutions obtained from fruit juices, solutions using pH paper or universal indicator.	1	3
3	Compare the pH of solutions of strong and weak acid of same concentration	1	3
4	Identify two Anions and Cations in a given sample.	1	3
5	Determine concentration by Conductometric titration.	1	3
6	Determine concentration by Potentiometric Titration.	1	3
7	Determine cell potential in Zn/Zn2+//Cu2+/Cu with change in concentration of electrolytes (CuSO4 or ZnSO4) at room temperature.	1	3
8	Determine conductance of strong and weak electrolytes	1	3
9	Determine concentration of given solutions	2	2
10	Prepare standard solution of oxalic acid and determine strength of a given solution of sodium hydroxide by titrating it against standard solution of oxalic acid.	2	2
11	Determine the concentration of KMnO4 solution using standard solution of Mohr's salt.	2	2
12	Prepare one lyophilic and one lyobhobic sol.	2	2
13	Determination of adsorption isotherm of acetic acid on activated charcoal	3	2
14	Test for the detection of halogens, nitrogen and sulphur in an organic compound.	5	1

15	Test for the functional group present in organic compounds.(Nitro,	5	1
	Alcoholic, Ketonic, Carboxyl, Amino, Aldehydic		