RG	GPV (Dipl	oma Wing) Bhopal	SCHEME F	OR LEARNING ICOME		Bra	nch	Cod	e	Со	urse (Code	CO Code	LO Code	Format No. 4
						С	0		2	3	0	2	1	1	-
CO NA	URSE ME	CHEMICAL TECHNOLO	DGY - I		· · ·				i					<u>'</u>	·
CO Des	scription	Use sulfur and sulph	uuric acid as raw material fo	or appropriate proce	ess										
LO Des	scription	Concept of unit ope	rations and unit processes												
		·		SCHEME O	F STU	DY									
S. No.	Lea	rning Content	Teaching –Learning Method	Description of Process	T-L	Tea Hrs	ch s.	Pı /Tu	ract. t Hrs.		LI	Rs Ree	quired		Remarks
1	Introduc operation processe between and schemati different and unit	tion to unit ns and unit s, difference unit operations unit processes, ic representation of unit operations processes	Interactive classroom teaching, demonstration, quiz, assignments, tutorial.	Teacher will exp the contents and provide handout students. Teacher conduct assignm quiz/tutorial to r students practice knowledge.	olain ss to er will nents/ nake e their	3		1		F	Hando PPT, t	uts, cl ext bo	halk boar ok.	d,	
				SCHEME OF A	SSESS	MEN	T								1
S. No.	Meth	od of Assessment	Description of A	Assessment	Max M	dimun arks	1			Res	source	es Req	uired		External / Internal
1	Pen paper	test/theory exam	Student will be explain unit operat process	e asked to ions and unit es		10	((Test (Ques	paper stion p	: + F bape	Rating er +Ra	scale)	and (and)		External
			ADDITIONAL INST	RUCTIONS FO	R THE	HOD	/ FA	ACUI	LTY	(IF .	ANY)				
				Nil	l										

R	GPV (Diple	oma Wing) Bhopa	1	SCHEME O	FOR LEARNIN UTCOME	īG	Brai	nch Co	ode		Cour Cod	se e	CO Code	LO Code	Format No. 4
							С	0	2	3	0	2	1	2	
	URSE AME	(Diploma Wing) Bhopal CHEMICAL TECHNOLC ion Use sulfur and sulphu ion To Draw process flo Learning Content I tr industry, Physical and lacal properties, Process to ption and flow chart, the process, Oxidation-tion of H2S,Iron pyrites the Process), Major eering problems, Uses and mics Iethod of Assessment 'aper test/theory exam					1						1		
CO Des	scription	Use sulfur and sulpl	huric ac	id as raw material fo	or appropriate proc	cess									
LO Des	scription	To Draw process f	low dia	gram for mining o	of sulfur										
					SCHEME O	F STU	DY								
S. No.	Lear	ming Content	Teac	hing –Learning Method	Description of Process	f T-L	Teach Hrs.	Pr /Tut	act. t Hrs	•	L	Rs Ro	equired		Remarks
1	JRSE ME CHEMICAL TECHNOLOGY – I cription Use sulfur and sulphuric acid as cription To Draw process flow diagram Learning Content Teaching Ma Sulfur industry, Physical and chemical properties, Process description and flow chart, Frasch process, Oxidation-reduction of H2S,Iron pyrites (Finish Process), Major engineering problems, Uses and economics Interactive tutorial. Method of Assessment De Pen paper test/theory exam Student methods	ctive classroom ng, nstration, quiz, ments, ıl.	Teacher will exp the contents and provide handout students. Teacher conduct assignm quiz/tutorial to n students practice knowledge.	plain l ts to er will nents/ make e their	4	2]	Hando board,	PPT	chalk , text boo	sk.			
					SCHEME OF A	SSESS	SMENT								
S. No.	Metho	od of Assessment		Description of A	ssessment	Max M	kimum arks			Res	source	es Re	quired		External / Internal
1	Pen paper	test/theory exam	Stuc	lent will be asked hods adopted to m	to explain the ine sulfur		10	(Test (Ques	paper tion j	: + F pape	Rating er +Ra	scale ting :	e) and scale)		Internal
COURSE NAME CHEMICAL TECHNOLOGY - I CODescription Use sulfur and sulphuric acid as raw material for appropriate process LO Description To Draw process flow diagram for mining of sulfur State Schement Pract. Pract. LRs Required Remarks 1 Sulfur industry, Physical and chemical properties, Process, Oxidation, reduction of H2S, Iron pyrites, (Finish Process), Major engineering problems, Uses and conomics Interactive classroom teaching, demonstration, quiz, assignments, tutorial. Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge. Pract. LRs Required Remarks 5. No. Method of Assessment Description of Assessment knowledge. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge. CHEME OF ASSESSMENT 5. No. Method of Assessment Description of Assessment methods adopted to mine sulfur Maximum Marks Resources Required External Internal 1 Pen paper test/theory exam Student will be asked to explain the methods adopted to mine sulfur 10 Test paper + Rating scale) and (Question paper + Rating scale) External Internal 1 Pen paper test/theory exam Student will be asked to explain the methods adopted to mine sulfur 10 Tes			I												
					Nil										

RGP	V (Diplor	na Wing) Bhopal	SCHEME FOR OUTC	R LEARNING OME	Bra	nch	Cod	le	Co	urse C	ode	CO Code	LO Code	Format No. 4
					С		0	2	3	0	2	1	3	
CO NA	URSE AME	CHEMICAL TECHNOLO	DGY - I			1	1							
CO De	scription	Use sulfur and sulph	nuric acid as raw material	for appropriate proc	ess									
LO Des	scription	Select appropriate p	rocesses for the producti	on of suphuric acid.										
				SCHEME	OF ST	UDY								
S. No.	Lea	arning Content	Teaching – Learning Method	Description of T-L Process			Tea	ich Hr	'S.	Pract /Tut Hrs.	t.	LRs Req	uired	Remarks
1	Sulphur and chem Process d chart of Major en Uses and obsolete reason fo	ric acid, Physical nical properties, lescription and flow Contact process, gineering problems, economics, other processes and r their absolution	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. uct /tutorial practice Feacher hke heir	he	05			02	H b la	Iandouts, ch oard, charts, ab.	alk	
				SCHEME OF	ASSES	SME	ENT		I				I	
S. No.	Meth	od of Assessment	Description of	Assessment	Maxiı Maı	num ·ks				Resour	rces R	equired		External / Internal
1	Pen Paper	r test/practical Exam	Student will be asked production and applic acid	to explain ation of sulphuric	10)	(' (! fe	Test pa Questi or prac	aper + on pap cticals	Rating per +Ra	scale) ting so	/ cale) and rat	ing scale	Internal (Practical)
			ADDITIONAL I	NSTRUCTIONS F	OR TH	E HO)D/ 1	FACU	LTY	(IF AN	Y)			,
			Ni	1										

R	GPV (Dip	oloma Wing) Bhop	al	SCHEME I OU	FOR LEARNIN TCOME	IG	Bran	ch (Cod	le	Cou	irse	Code		CO Code	LO Code	Format No. 4
							C	0		2	3		0 2	2	1	4	
CO NA	URSE ME	CHEMICAL TECHNO)logy -														
CO Des	scription	Use sulfur and sulpl	nuric acid a	as raw material fo	or appropriate pro	ocess											
LO Des	scription	Identify the raw ma	terials for	manufacturing	of glass												
	-			U	SCHEME C	F STUD	Y										
S. No.	Lear	rning Content	Teachi N	ng –Learning ⁄Iethod	Description Proces	of T-L s	Tea Hr	nch :s.] /T	Prac Fut H	t. Irs.		LRs	Re	quired		Remarks
1	Composit Methods o Manufact glasses-fu silica constructi	ion, Raw material, of manufacturing, turing of special sed silica & high glass, building on glass	Interacti teaching demonst assignme lab demo	ve classroom , ration, quiz, ents, tutorial. onstration	Teacher will ex the contents an provide handou students. Teach will conduct assignments/ quiz/tutorial to students praction their knowledge	xplain ad uts to her make ce ge.	04		01			Hatboa	ndout urd, P	s, c PT,	halk text bo	ook,	
					SCHEME OF A	SSESSN	IEN'	r									1
S. No.	Meth	od of Assessment	D	escription of A	ssessment	Maxiı Maı	num rks				Res	sour	ces R	lequ	uired		External / Internal
1	Pen paper	test/theory exam	Student differen	will be asked to t types of glass) describe	1()	("	Test Que	t pape estion	er + F pape	Ratir er +F	ng sca Rating	le) : g sca	and ale)		Internal
			ADDIT	IONAL INSTR	RUCTIONS FO	R THE I	HOD	/ F A	ACU	JLTY	/ (IF	AN	Y)				<u> </u>
					Ni	1		13			. (**		-,				

RG	GPV (Diplo	oma Wing) Bhopa	I SCHEME FOR	R LEARNING OME	B	ranch C	Code	Cou	urse (Code	CO Code	LO Code	Format No. 4
		1	0010		C	0	2	3	0	2	2	1	
CO NA	URSE AME	CHEMICAL TECHNO	LOGY - I										
CO Des	scription	Describe propertie	es and manufacturing proces	ses of chloro a	lkali chem	icals							
LO Des	scription	Identify soda ash b	ased on chemical and physical	properties.									
				SCHEME O	F STUDY								
S. No.	Lear	ming Content	Teaching –Learning Method	Description Proce	n of T-L ess	Teach Hrs.	Pra /T Hi	act. 'ut rs.		LRs R	equired		Remarks
1	Soda carbonate chemical , Method flow shee Dual engineerin and econd	ash (Sodium e), Physical and properties of production and et, Solvay process, process, Major ng problems, Uses omics.	Interactive classroom teaching, demonstration, quiz, assignments, tutorial.	Teacher will the contents provide hand students. Tea will conduct assignments/ quiz/tutorial students prac their knowle Teacher will lab assignment make studen practice their knowledge	explain and louts to acher / to make ctice dge. conduct ents to ts r	08	02		Han boar lab.	douts, rd, PP7	chalk Γ, text bo	ook,	
			SC	HFMF OF A	SCESSME	TINT							
S. No.	Metho	od of Assessment	Description of Asse	essment	Maxim Mark	um s		Res	sourc	es Req	luired		External / Internal
1	Pen Paper Exam/prac	test/Theory ctical Exam	Student will be asked to o different processes for soc manufacturing and their ap	describe la ash pplication.	10	(T (Q sc	est par Question ale for	per + I n pape practi	Rating er +Ra icals	g scale)/ cale) and	l rating	External
			ADDITIONAL INSTRU	CTIONS FOR	R THE HO	DD/ FA	CULT	Y (IF	ANY	<i>(</i>)			
				Nil									

R	GPV (Dir	oloma Wing) Bhopal		SCHEME FOR	LEARNING	Bran	ch Code	ę	Cou	irse Co	ode	CO Code	LO Code	Format No. 4
	(······································	-	OUTCO	OME	С	0	2	3	0	2	2	2	
CO NA	URSE ME	CHEMICAL TECHNOLO)GY - I			1		I		1		1		1
CO Des	scription	Describe properties a	nd manu	facturing processes of chloring	oro alkali chemic	als.								
LO Des	cription	Compare processes for	or the pro	oduction of caustic soda.										
		1		S	SCHEME OF S	STUDY								
S. No.	Lear	rning Content		Teaching – Learning Method	Descriț P	otion of T- rocess	L	Teacl Hrs.	h	Pract /Tut Hrs.	•	LRs	Require	ed Remark
1	. Caustic sc Physical an , Method c chart, Elec Membrane engineerin economics ,Physical an Method of hydrochlor problems,	oda-chlorine process, ad chemical properties of production and flow strolytic process, e cell process, Major g problems, Uses and , Hydrochloric acid and chemical properties, , production of ide, Major engineering Uses and economics	5	Interactive classroom teaching, demonstration, quiz, assignments, tutorial. lab demonstration	Teacher will ex- contents and p handouts to stu Teacher will co- assignments/ of to make studen their knowledg will conduct la assignments to students practi- knowledge	xplain the rovide idents. onduct juiz/tutorial nts practice ge. Teacher ib o make ce their		07		2		Handout board, cl lab.	s, chalk harts, ,	
				SCH	EME OF ASS	ESSMEN	Γ							
S. No.	Meth	od of Assessment	I	Description of Assessme	ent M	aximum Marks		Res	ources	s Requ	iired	l]	External / Internal
1	Pen Paper Exam/pra	test/Theory ctical Exam	Studen differen manufa	t will be asked to describ at processes for soda ash acturing and their applica	be 10 ation		(Test pa (Questic scale for	aper + F on paper r practic	Rating r +Rat cals	scale), ing sca	/ ale) a	and rating	Exte	ernal
			AD	DITIONAL INSTRUC	TIONS FOR 7	THE HOD	/ FACU	LTY (I	FAN	Y)				
					Nil									

F	RGPV (Dir	oloma Wing) Bhor	pal	SCHEME	FOR LEARNIN	G	Brai	nch (Cod	le	Co	ourse	Co	de	CO Code	LO Code	Format No. 4
				OI OI	JTCOME		С	0		2	3	l)	2	2	3	-
	URSE AME	CHEMICAL TECHNOL	.0GY – I	'			I		_					I			1
CO Des	scription	Describe properties	s and manu	facturing process	ses of chloro alkali	chemica	ls.										
LO Des	scription	Use bleaching powe	der judicio	usly as per need.													
					SCHEME O	F STU	DY										
S. No.	Lea	rning Content	Teach	iing –Learning Method	Description Process	of T-L s]	Гeacl Hrs.	n	F	rac /Tut Hrs.	t. t	I	LRs Required	Remark
1	Bleaching Introducti chemical j Method of Major eng problems, economica	powder, on, Physical and properties, f production , gineering Uses and s	Interact teaching demons assignm lab dem	ive classroom g, tration, quiz, ents, tutorial. onstration	Teacher will exp and provide ham Teacher will cor assignments/ qu students practice Teacher will cor assignments to r practice their kn	blain the douts to nduct iz/tutori e their k nduct lal nake stu owledge	e conte stude al to r nowle o idents e.	ents ents. nake edge	05	5		01			Hand board book	louts, ch d, PPT, t , charts.	alk ext
					SCHEME OF A	SSESS	MEN	Г									
S. No.	Meth	od of Assessment	I	Description of A	ssessment	Max Ma	imum arks	L			Re	esoui	ces	Req	uired		External / Internal
1	Pen Paper Exam/pra	test/Theory ctical Exam	Studer bleach	nt will be ask ing powder and	ed to explain its uses.	1	0	(] ((sc	Fest Que cale	t pape estion for p	er + pap pract	Ratin er +l ticals	ng so Ratii	cale) ng sc	ale) and	rating	External
			ADDI	FIONAL INST	RUCTIONS FO	R THE	HOD	/ FA	CU	LTY	(IF	F AN	Y)				
					Nil												

F	RGPV (Dij	oloma Wing) Bhopa	al	SCHEM	IE FOR LEARN	ING	Bra	anch C	ode	Cou	rse C	ode	CO Code	LO Code	Format No. 4
	` ·				OUTCOME		С	0	2	3	0	2	3	1	
CO NA	URSE ME	CHEMICAL TECHNOL	.0GY - I.									1			
CO Des	scription	Identify properties	of industr	rial gases and	manufacture indu	strial gase	s on sr	nall sca	ıle						
LO Des	cription	Identify gas handlin	ng equipn	nents based or	properties of gas	es.									
	-		0 1 1		SCHEME	C OF STU	DY								
			Тея	ching _	Descript	ion of T-l	 [,	Т	each	Pr	nct.				
S. No.	Lea	rning Content	Le	arning [ethod	Pr	ocess		H	Irs.	/T H	ut rs.		LRs Red	quired	Remarks
1	Industria	l gases : Brief	Interacti	ve classroom	Teacher will exp	lain the co	ontents	08		03		Ha	ndouts,	chalk	
	knowledge of gases viz. hydrogen, oxygen, water		teaching	•	and provide hand	louts to st	udents					boa	rd, PPT,	text	
	hydrogen, oxygen, water gas, producer gas,		demonst	ration, quiz,	Teacher will con	duct						boo	ok, charts.	lab	
	nydrogen, oxygen, water gas, producer gas,		assignme	ents, tutorial.	assignments/ qui	z/tutorial	to								
	gas, producer gas, carbureted water gas,		lab demo	onstration	make students pr	actice the	ir								
	nitrogen,	, acetylene gas,			knowledge. Tead	cher will c	onduct	ţ							
	Physical	l and chemical			lab assignments	to make st	udents	5							
	propertie	es, Method of			practice their kn	owledge.	1								
	productio	on, Major			Teacher will der	nonstrate (he								
	engineer	ing problems, Uses			procedure of lab	experime	nts.								
	and econ	ionnes			SCHEME OI		NATONI	 T							
					SCHEME OF	ASSESS		1						T (
S. No.	Meth	od of Assessment	D	escription of	Assessment	Maximu	IM Ma	rks]	Resou	irces	Require	d Ext	ernal / Internal
	Pen paper	test/theory exam	Student	will be ask	ed describe				(T -		· D. 4	•		Inte	ernal
1			differen	t industrial	gases with		10		(Tes	t paper	+ Rat	ing s	cale) and		
1			their ap	plications.	guses with		10		(Que	estion p	aper -	Rati	ng scale)		
			ADDI	TIONAL IN	STRUCTIONS F	OR THE	HOD	/ FAC	ULTY	(IF A	NY)				
						Nil				(1	. = ,				
						1111									

R	GPV (Diple	oma Wing) Bhopal	SCHEME FOR	LEARNING	Br	anch (Code	Co	ourse (Code	CO Code	LO Code	Format No. 4
	× 1	87 I	OUTCO	DME	С	0	2	3	0	2	3	2	_
CO NA	URSE AME	CHEMICAL TECHNOLO	JGY - I		I							1	
CO De	scription	Identify properties of	of industrial gases and mai	nufacture indust	rial gases	on sma	all scale	e					
LO Des	scription	Select equipment for	r production of ammonia/	urea									
				SCHEME O	F STUDY	Y							
S. No.	Lear	rning Content	Teaching – Learning Method	Description Proce	of T-L ss		Te H	ach rs.	Pra /Tu Hr	ct. ut 's.	LRs Req	uired	Remarks
1	Nitrogen I Physical a , Method c engineerin economics and chemi productior problem, Urea: Phy properties, Major eng and econo	ndustries: Ammonia, nd chemical propertie of production, Major og problems, Uses and s, Nitric Acid, Physic cal properties, Metho n, Major engineering Uses and economics, vsical and chemical , Method of productio ineering problem, Us mics	Interactive s classroom teaching, demonstration, al quiz, assignments, d of tutorial. lab demonstration	Teacher will e contents and p to students. Te conduct assign quiz/tutorial to practice their k Teacher will c assignments to practice their k Teacher will d procedure of la	xplain the rovide has acher will ments/ o make stu cnowledge onduct lat o make stu cnowledge emonstrat ab experir	e ndouts 1 idents e. b idents e. te the ments.	08		03		Handout chalk bo PPT, tex book, ch lab.	ts, ard, tt arts,	
			S	CHEME OF A	SSESSM	ENT							
S. No.	Meth	od of Assessment	Description of As	sessment	Maxin Mar	num ks		F	Resour	ces R	equired		External / Internal
1	Pen Paper Exam/pra	test/Theory ctical Exam	Student will be aske production processes an of nitrogen products.	d to explain d applications	10		(Test) (Quest) scale f	paper tion pa for pra	+ Ratin aper +F acticals	ng sca Rating	le)/ g scale) an	d rating	External Theory &Internal practical
			ADDITIONAL INSTR	UCTIONS FO	R THE H	OD/ F	ACUL	TY (I	F ANY	Z)			
				Nil				,					

R	RGPV (Dip	oloma Wing) Bho	pal	SCHEM	E FOR LEARNIN	G Br	anch (Code	Co	ur	se C	Code	CO Code	LO Code	Format No. 4
CON	URSE ME	CHEMICAL TECHNO	Ology — I				0		3		0	2	4		
CO Des	scription	Identify engineer	ring proble	ms in producti	on processes of Phos	phorous Ind	ustries								
LO Des	cription	Identify equipme	nts for the	production of I	Phosphoric acid										
					SCHEME OF	STUDY									
S. No.	Lear	ming Content	Teachii N	ng –Learning Aethod	Description of T Process	-L	Teac h Hrs		Pract. /Tut Hrs.]	LRs Req	uired	Remarks
1	Phosphor acid, Phy chemical Process of flow char engineeri , Uses and	rus, phosphoric sical and properties, description and rt, Major ng problem d economics	Interactiv teaching, demonstra assignmen lab demon	ve classroom ation, quiz, nts, tutorial. nstration	Teacher will explain contents and provid to students. Teacher conduct assignment quiz/tutorial to mak practice their know Teacher will conduc assignments to mak practice their know	n the e handouts : will s/ e students ledge. ct lab e students ledge	07	0	3			Iando oard, ook, ab.	outs, PPT, charts,	chalk text	
					SCHEME OF AS	SESSMENT	Γ								
S. No.	Metho	od of Assessment	I	Description of	Assessment	Maximu Marks	im S		F	Res	sour	ces l	Require	ł	External / Internal
1	Pen Paper	test/Theory Exam	Studen produc phosph	t will be asked tion method of oric acid and th	to describe phosphorous and heir testing	10	(' () r:	Test Ques ating	paper + tion pa scale f	- R per	atin r +R prac	ng sca Rating ctical	lle)/ g scale) a s	and	Internal
			ADDI	FIONAL INS	FRUCTIONS FOR	THE HOD	FAC	ULŤ	Y (IF A	AN	ĪY)				
					Nil										

R	GPV (Dir	oloma Wing) Bhon	al	SCHEME FO	R LEARNIN(G Bra	nch Co	de	Cou	rse C	Code	CO Code	LO Code	Format No. 4
		F		OUTO	COME	С	0	2	3	0	2	4	2	-
CO NA	URSE ME	CHEMICAL TECHNOL	OGY – I								1	1	-	,
O Des	scription	Identify engineerin	ng proble	ms in production pr	rocesses of Pho	osphorous Ir	ndustrie	S						
O Des	scription	Identify major Engine	eering prol	plems associated wit	h the productio	n of phospho	orus bas	ed fe	rtilizers	;				
					SCHEME O	F STUDY								
. No.	Lea	rning Content	Teach	ing –Learning Method	Description Proc	n of T-L ess	Teac Hrs.	h F	/ Pract. Hrs	Tut	I	LRs Requ	iired	Remarks
1	Super pho super pho and chem Process de chart, Ma problem, economic	osphate and triple sphate , Physical ical properties, escription and flow ajor engineering Uses and s	Interacti teaching quiz, ass tutorial. demonst	ve classroom , demonstration, signments, lab tration	Teacher will contents and handouts to s Teacher will assignments/ quiz/tutorial t students pract knowledge. T conduct lab a to make stude practice their HEME OF A	explain the provide tudents. conduct to make tice their Ceacher will ssignments ents knowledge SSESSMEN	08 	0			Hand boar chart	louts, cha d, PPT, te ts, lab.	lk ext book,	
5. No.	Meth	od of Assessment	E	escription of Asse	essment	Maximu Marks	n		Re	sour	ces Re	equired		External / Internal
1	Pen Paper test/Theory Exam/practical Exam		Studer scale p fertiliz	nt will be asked to oppose the opposed of the oppos	describe large phorus based acteristics.	10	(To (Q sca	est pa uesti ile fo	aper + ion pap or pract	Ratin er +R icals	ig scale Rating	e)/ scale) and	l rating	External
			ADDIT	TIONAL INSTRU	CTIONS FOR	R THE HO	D/ FAC	CUL	TY (IF	'AN'	Y)			
					nil									

R	GPV (Dir	oloma Wing) Bhor	bal	SCHEME F	OR LEARNIN	NG	Brai	nch C	ode	Cou	rse (Code	CO Code	LO Code	Format No. 4
	` •			OU.	ICOME		С	0	2	3	0	2	5	1	
COU NA	URSE ME	CHEMICAL TECHNO	DLOGY - I			'		1	-				<u> </u>		
CO Des	cription	manufacture surfac	e coating a	and finishing prod	ucts.										
LO Des	cription	Explain different	type of pair	nt and varnishes c	on the basis of a	chemical a	nd pł	nysica	l prop	erties					
					SCHEME O	F STUDY	•								
S. No.	Lea	rning Content	Teachi	ing –Learning Method	Description Proce	n of T-L ess	Te H	each Irs.	Pı /Tu	ract. t Hrs.		LR	s Requir	ed	Remarks
1	Paints ar Introduc between and lacq paints, v lacquers. Manufac varnishe	id Varnishes, tion, Difference paints, varnishes uers, Types of arnishes and ture of paints, s and lacquers	Interactiv teaching, quiz, assi tutorial.	demonstration, gnments,	Teacher will the contents a provide hand students. Teacher will c assignments/ quiz/tutorial to students practic knowledge.	explain and outs to conduct o make ice their	0	15		01		andoi oard, i	its, chalk PPT, text lab.	book,	
	1			SC	CHEME OF A	SSESSMI	ENT								
S. No.	Meth	od of Assessment	D	escription of Ass	essment	Maxim Mark	um s			Reso	urce	es Req	luired		External / Internal
1	Pen paper	• test/theory exam	Studen various	t will be asked to paint, varnishes	describe and laquars	10		(Tes (Que	t pape estion	er + Ra paper	ting +Ra	scale) ting s) and cale)	Ex	ternal
			ADDIT	IONAL INSTRU	CTIONS FO	R THE HO) ()	FACU	JLTY	(IF A	NY))			
					Nil	1									

RGPV (Diploma Wing) Bhopal				SCHEME FOR LEARNING		Brar	ı Code		Course (Code	CO Code	LO Code	Format No. 4	
				00100	IVI E	M	0	2		3	0	2	2 5 2		_
COURSE NAME CHEMICAL TECHNOLO			_OGY – I			i			I						
CO Description manufacture surface coati				ng and finishing produc	cts										
LO Description Use different pigments			ents for	paint and varnish prep	aration.										
		1		S	CHEME O	F STUDY									
S. No.	No. Learning Content		Teaching –Learning Method		Description of T-L Process			ich 's.	[/T	Prac 'ut H	et. Irs.	LRs Required		uired	Remarks
1	Uses of Titanium lithophor copper oxide in industrie	of White lead, a oxide, Zinc oxide, ne, lead chromate, sulfate and iron paint and varnish s.	Interac classro demon assigni tutoria	tive om teaching, stration, quiz, ments, l.	Teacher will of contents and handouts to s Teacher will of assignments/ of to make studen their knowledg will conduct la assignments to students practi		05		02 Handouts, chalk board PPT, lab.			alk ab.			
				SCH	EME OF A	SSESSMENT			1						
S. No.	. No. Method of Assessment			Description of Assess	Maximum Marks		Resources Required							External / Internal	
1	Pen paper exam	Pen paper test/ theory exam		ent will be asked to uction process for the int and varnishes.	o describe production	10	(Test paper + Rating scale) and (Question paper +Rating scale)							External	
	I		ADD	ITIONAL INSTRUC	TIONS FOI	R THE HOD/	FACU	JLT	'Y (]	IF A	NY)				I

R	GPV (Dig	oloma Wing) Bhopa	SCHEME FOR LEARNING			G	Branch Code		ode	le Cours		Code	CO Code	LO Code	Format No. 4
				OUTCOME			С	0	2 3		0	2	5	3	
COURSE NAME CHEMICAL TECHNOLO			DGY – I							1			1	1	
CO Description manufacture surface c			coating an	d finishing	products.										
LO Des	cription	manufacture cement	t as per end	uses											
SCHEME OF STUDY															
S. No.). Learning Content		Teaching – Learning Method		Description of T-L Process		Teach Hrs.		Pract. /Tut Hrs.			LRs Required			Remarks
1	physical and chemical properties of clinker,types of cement ,process description and flow chart,wet and dry process,portland cement production,major sngineering problems , uses and economics,different water proofing agents and there functioning, and prodution methods		Interactive classroom teaching, demonstra quiz, assig tutorial.	Interactive Teacher will expla classroom teaching, demonstration, quiz, assignments, tutorial. Teacher will expla contents and provi- handouts to studen Teacher will conduct assignments/ quiz/tr to make students pr their knowledge. Te will conduct lab assignments to mak students practice the knowledge		n the le s. t torial actice acher	08		02		Handouts, chalk board, charts, video film, virtual lab.			ooard,	
					SCHEME OF AS	SSESSM	1ENI	[
S. No.	Meth	ethod of Assessment Description of			f Assessment Maxim		mum rks		Resources Required					External / Internal	
1	Pen Paper test/Theory Exam/practical Exam		Student will be asked to manufacturing and pro- grade cements with the		to describe roperties of various neir testing.)	(Te (Qu sca	(Test paper + Rating scale)/ (Question paper +Rating scale) and rating scale for practicals			l rating	External		
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)															
					Nli										

List of Practicals

S.No.	NAME OF EXPERIMENT	СО	LO
1	Determine Purity of given sample of H ₂ SO ₄	1	2
2	Determine Purity of given sample of Sodium Carbonate.	2	1
3	Prepare caustic soda by chemical method	2	2
4	To determine the available chlorine in the given sample of bleaching powder by the lodometric method	2	3
5	Determine nitrogen content in fertilizer by Kjeldahl method.	3	2
6	Determine purity of HNO₃	3	2
7	Prepare urea formaldehyde resin	3	2
8	Determine the percentage of phosphorous in calcium phosphate sample	4	2
9	Determine the percentage of phosphorous in triple super phosphate sample.	4	2
10	Determine the percentage of phosphorous in single superphosphate sample	4	2
11	Measure viscosity of paint/varnish with the help of dip Cup and flow cup viscometer	5	1
12	Measure viscosity of paint/varnish with the help of bubble and rotational viscometer	5	1