RG	PV (Diplo	oma Wing) Bhopal		OR LEARNING		Brancl	1 Code	. (Course	Code	CO Code	LO Code	Format No. 4
_		8) 1	OUI	COME		M () 2	2	4 0	2	1	1	_
	URSE ME	Fluid Mechanics &	& Hydraulic Machinery		I	I		1					
CO Des	cription	Discuss fluids, pro	perties of fluid, pressur	e and its measur	ement	5.							
LO Des	cription	Compare different	fluids on the basis of thei	r properties/chara	cteristi	cs.							
				SCHEME O	F STU	DY							
S. No.	Lea	rning Content	Teaching –Learning Method	Description of Process	T-L	Teach Hrs.		act. Hrs.	L	Rs Re	equired		Remarks
1	of fluid- fluids, 0 Incompre Newtonia Newtonia and nor rotationa fluids, Density, Specific volume, surface t	an and non- an fluid, viscous i- viscous fluids, l and ir-rotational fluid properties- Specific weight, gravity, Specific Vapour pressure, ension, capillarity, and kinematic	Interactive classroom teaching, demonstration, quiz, assignments, tutorial.	Students will the processes the the discussion the teacher on co provided by te and random taken by them.	with ontent	06	C	00	PPT,	text b	halk boar ook, char oo film.	· ·	
	1			SCHEME OF AS	SSESS	MENT							
S. No.	Meth	od of Assessment	Description of A	ssessment		imum arks		F	Resourc	es Re	quired		External Internal
1	Paper per	n test	Student will be asked given fluids on the properties.	- 1		10	Ques	tion pa	aper + F	Rating	scale		Internal
			ADDITIONAL INST	RUCTIONS FOR	R THE	HOD/ F	ACUL	LTY (I	F ANY)			
				Part of Progres	sive Te	est- I							

R	GPV (Dipl	oma Wing) Bhopal		E FOR LEARNIN	NG	Brai	nch C	ode		Cours Code		CO Code	LO Code	Format No. 4
		8) I	C C	DUTCOME		M	0	2	4	0	2	1	2	
	URSE ME	Fluid Mechanics &	& Hydraulic Machiner	У		1	1	1				1	1	
CO Des	cription	Discuss fluids, pro	perties of fluid, pressu	re and its measu	rement	S.								
LO Des	cription	Measure pressure u	sing simple and differen	ntial manometers.										
				SCHEME C)F STU	DY								
S. No.	Lea	rning Content	Teaching –Learning Method	Description of Process		Teach Hrs.		ract. t Hrs.		LR	Rs Re	equired		Remarks
1	pressure pressure law, principle	ement: Fluid and its units, eric pressure, pressure, vacuum absolute pressure,	Lab demonstration, hands on practice, lab assignment, quiz, assignments.	demonstrate procedure of work. The st	will the lab tudents hrough	04		06	PP vie	PT, te	xt bo ilm,	chalk boa ok, charts virtual la	,	
				SCHEME OF A	SSESS	MENT								
S. No.	Meth	od of Assessment	Description of A	Assessment		kimum arks			Reso	urce	s Re	quired		External / Internal
1	Laborato observati	5 5	Student will be as pressure using simple manometers.		10			ervationg sca				eck-list		Internal
	1		ADDITIONAL INST	RUCTIONS FO	RTHE	HOD/ F	ACU	LTY (IF A	NY)				
				Part of La										

RGP	V (Diplom	a Wing) Bhopal	SCHEME FOR I		Bra	anch Co	ode	Co	ourse C	ode	CO Code	LO Code	Format No.
	(I	87 I	OUTCO	ME	M	0	2	4	0	2	1	3	4
	URSE ME	Fluid Mechanics	& Hydraulic Machinery	,	·	<u>'</u>				·	·		•
CO Des	cription	Discuss fluids, pro	operties of fluid, pressu	e and its measur	ements.								
LO Des	cription	Solve numerical pr	oblems based on Pascal's	s law.									
		·		SCHEME C)F STUD	Y							
S. No.	Lear	rning Content	Teaching –Learning Method	Description of Process	T-L	Teach Hrs.		act. Hrs.	L	Rs Re	quired	R	emarks
1	on Pasc and	al problems based al's law, Simple Differential ters for pressure nent.	Interactive classroom teaching, demonstration, quiz, assignments, tutorial.	provided by t and random quiz by them.	gh the h the content teacher z taken	05		00	· · ·	PPT,	chalk text book, hs, video		
				SCHEME OF A	SSESSN	1ENT							
S. No.	Metho	od of Assessment	Description of A	ssessment	Maxii Mai	-			Resour	rces R	equired		External / Internal
1]	Theory exam	Student will be asked pressure using Pascal' given problem.		00	6		Que	estion pa	aper +	Rating scale	2	External
	1		ADDITIONAL INST	FRUCTIONS FO	R THE I	HOD/ F	ACUL	ГY (IF	ANY)				1
				Part of The					,				
					-								

RO	GPV (Dip	loma Wing) Bhop	al		FOR LEARNING TCOME		Branch M 0		Co 4	urse C	ode	CO Code 2	LO Code	Format No. 4
COU NA	JRSE ME	Fluid Mechanics	& Hydra	ulic Machinery	7		<i>IVI U</i>		4	0				
CO Dese	cription	Measure discharg	ge using	Venturimeter, (Orifice-meter, Pi	tot-tub	e.							
	cription	Compare different												
				• •	SCHEME OF	F STUD	Y							
S. No.	Lear	rning Content		ng –Learning Method	Description of Process	f T-L	Teach Hrs.		act. Hrs.	I	.Rs R	Required		Remarks
1	potential energy, total ener flow- L and tran	of Fluid Flow:- energy, kinetic pressure energy, rgy, Types of fluid aminar, turbulent sient, Steady and y, Uniform and orm	teaching demons	· ·	Students will leaprocesses throu discussion wit teacher on of provided by t and random quiz by them.	igh the th the content teacher	04	00		Hand board video	l, PP	T, text bo	nalk pok,	
				S	SCHEME OF AS	SSESSN	IENT							
S. No.	Metho	od of Assessment	D	escription of A	ssessment	Maxiı Mai			Re	source	es Re	quired		External / Internal
1	р	aper pen test	given	nt will be asked t fluid flows base ties/characterist	d on given	10)		Questi	on pape	er + R	Rating sca	lle	Internal
			ADDIT	IONAL INSTR	RUCTIONS FOR Part of Progressi			ACUL	TY (II	FANY)			

RG	PV (Diplo	oma Wing) Bhopal	SCHEME FOR		B	ranch C		Co 4	urse (CO Code 2	LO Code 2	Format No. 4
	URSE ME	Fluid Mechanics	& Hydraulic Machinery			(0	2	4	0	2	2	2	
CO Des	cription	Measure discharg	ge using Venturimeter, Ori	fice-meter, Pi	itot-tube.								
LO Des	cription	Apply Bernoulli's	theorem and Continuity equa	ation for a give	en situatio	on.							
				SCHEME O	F STUDY	7							
S. No.	Lear	rning Content	Teaching –Learning Method	Description Proce		Teach Hrs.	/]	act. Fut Irs.		LRs F	Required		Remarks
1	Continuit Bernoull Assumpt and its a	i's theorem:-	Interactive classroom teaching, demonstration, quiz, assignments, tutorial.	the p through discussion w teacher on provided by and randon taken by then	content teacher n quiz n.	06	00		boar		T, text be leo film.	halk bok,	
			SCI	HEME OF AS	SSESSMI	ENT							
S. No.	Metho	od of Assessment	Description of Asse	ssment	Maxim Mark	-		Re	sourc	es Rec	quired		External / Internal
1]	Theory exam	Student will be asked to a Bernoulli's theorem and C equation for a given situa	Continuity	10		Ç	Juestic	on pap	er + R	ating sca	le	External
			ADDITIONAL INSTRU			OD/ FA	CUL	ГY (II	FANY	<i>.</i>)			
				Part of Theo	ry Exam								

R	GPV (Din	oloma Wing) Bhopal		R LEARNING	B	ranc	ch Co	ode	Cours	se (Code	CO Cod		Format No. 4
		8) I	OUT	COME	M	[0	2	4	() 2	2	3	
	URSE ME	Fluid Mechanics &	Hydraulic Machinery		I	1			1		1			
CO Des	scription	Measure discharge	using Venturimeter, Orif	ice-meter, Pitot	t-tube.									
LO Des	scription	Measure discharge us	sing Venturimeter, Orifice-	meter, Pitot-tub	e.									
		1		SCHEME OF S	STUDY									
S. No.	Le	earning Content	Teaching –Learning Method	Description Process			each Irs.	Pr	act. /Tu Hrs.	ut	L	Rs Rec	luired	Remarks
1	Orifice- Construc discharge meter, Construc	etion and working, e through neter,Vena contracta, meter- Principle, etion and working, e through Orifice- Pitot-tube - Principle,	hands on practice, lab assignment, quiz, assignments.	Teacher demonstrate procedure of la The students w through practic	vill learn	06		09			boar bool	x, chart , virt	s, video	
			SCI	IEME OF ASS	ESSMEN	NT								
S. No.	Metho	od of Assessment	Description of Asses	ssment	Maximur Marks	n			Resou	rce	s Re	quired		External / Internal
1		ooratory test by observation	Student will be asked to m discharge in a pipe using a instrument.		10		Obs	ervat	ion sche /rating					External
	1		ADDITIONAL INSTRUC	CTIONS FOR 1	гне ноі	D/ F .	ACU	LTY	(IF AN	NY))			
									•					

R	GPV (Diploma Wiı	ng) Bhopal		OR LEARNING	Bra	nch	Code	Cou	irse C	Code	CO Code	LO Code	Format No. 4
		87 I	OU ¹	ГСОМЕ	M	0	2	4	0	2	3	1	
	JRSE ME Fluid M	echanics &	z Hydraulic Machinery		i				-				'
CO Des	cription Solve nu	ımerical pr	oblems based on minor,	major losses in	pipes and i	mpac	ct of je	et.					
LO Dese	cription Measure	Reynolds r	number and minor losses i	in pipes.									
	I			SCHEME OF	STUDY								
S. No.	Learning Con	itent	Teaching –Learning Method	Description Proce		-	each Irs.	Pra /Tu Hr	ıt	I	.Rs Requ	uired	Remarks
1	Flow Through Laminar, turbule transient flow, number, different laminar, turbule transient flow on of Reynolds numbe losses in pipes.	ent and Reynolds iation of nt and the basis	Lab demonstration, hands on practice, lab assignment, quiz, assignments.	the procedure	e of lab idents will	02		09		PPT,	louts, cha text book, film, vir ls	charts,	
		I	S	CHEME OF AS	SESSMEN	T		1					
S. No.	Method of Asso	essment	Description of As	sessment	Maximun Marks	n		Res	sourc	es Re	quired		External / Internal
1	Laboratory te observatio		Student will be asked to Reynolds number and n for a given pipe.		10		Obser	vation s /rat			eck-list rubrics		External
			ADDITIONAL INSTR	UCTIONS FOR	THE HOL)/ FA	CUL	ГY (IF	ANY)			1
				Part of Practic	al Exam								

R	RGPV (Dip	oloma Wing) Bhop	al		OR LEARNIN TCOME	G	Bra	nch	Co	de	С	ourse	Code	CO Code	LO Code	Format No. 4
				00	ICOME		M	0		2	4	0	2	3	2	
	URSE AME	Fluid Mechanics	& Hydra	ulic Machinery												
CO Des	scription	Solve numerical p	oroblems	based on minor,	major losses in	pipe flov	v and	l imp	pact	t of je	et.					
LO Des	cription	Calculate major lo	sses in pij	be flow using Darc	ey's equation and	l Chezy's	equa	tion.	•							
		1			SCHEME O	F STUD	Y									
S. No.	Lear	ning Content		ing –Learning Method	Description of Process		Tea Hr			Pract. ut H1		Ι	.Rs Re	equired		Remarks
1	Calculate pipe flo equation equation.	and Chezy's		ve classroom , demonstration, ignments,	Students will le processes throu discussion witteacher on provided by and random qui by them.	ugh the ith the content teacher	06		00				text b	halk boar ook, char	· · · ·	
				S	SCHEME OF A	SSESSN	1EN I	Γ								
S. No.	Metho	od of Assessment	Γ	Description of Ass	essment	Maxii Mai	-				R	esour	es Re	quired		External / Internal
1	ן ו	Theory exam		nt will be asked to losses in flow for		10)			Qı	uesti	ion paj	per + F	Rating sca	le	External
			ADD	ITIONAL INSTR	RUCTIONS FO	R THE I	IOD	/ FA	CU	LTY	(IF	ANY)				
					Part of The	ory Exan	ı									

RG	GPV (Diplo	oma Wing) Bhopal	SCHEME FOR OUTCO			nch Coo		Cou	ırse (Code	CO Code	LO Code	Format No. 4
	URSE	Fluid Mechanics	& Hydraulic Machinery		M	0	2	4	0	2	3	3	
	ME	Salwa numariaal n	vahlama haaad an minan		nin a flav			of: 04					
	scription	-	oroblems based on minor,	0	pipe nov	and im	pact	oi jet.					
LU Des	scription	Calculate force exe	erted by a jet for a given van	1	CTUDY	•							
S. No.	Lea	rning Content	Teaching –Learning Method	SCHEME OI Description Proces	of T-L	Teach Hrs.		Pract. Tut Hrs		LR	s Requir	ed	Remarks
1	Jet on plate, m plates a stationar velocity Simple n	diagram. numerical problems on fixed vertical,	Interactive classroom teaching, demonstration, quiz, assignments, tutorial.	Students will processes three discussion we teacher on provided by te random quiz them.	ough the vith the content acher and		00	I	b		uts, PPT, text video filr		
			S	CHEME OF AS	SESSMI	ENT							
S. No.	Meth	od of Assessment	Description of Ass		Maxim Mark	um		Re	esour	ces R	equired		External Internal
1]	Theory Exam	Student will be asked force exerted by a jet of given vane/plate.		08			Questio	on pa	per +	Rating sc	ale	External
			ADDITIONAL INSTR			DD/ FA	CUL	ГY (IF	ANY	Y)			
				Part of Theo	ry Exam								

R	RGPV (Dip	oloma Wing) Bhopa	al SC	-	OR LEARNI TCOME	NG	Bran	ch (Code		Cour	·se C	Code	CO Code	LO Code	Format No. 4
	URSE	Fluid Mechanics &	& Hvdraulic Ma				M	0	2		4	0	2	4	1	
	ME															
	scription	Select a suitable h														
LO Des	cription	Explain Construction	n, working and sele	ection criteri			nd Ka	plan	turb	ine.						
					SCHEME O	F STUDY	1									
S. No.	Lea	rning Content	Teaching –Le Method		Description Proce		Tea Hr		/]	act. Fut Irs.			LRs	Require	d	Remarks
1	turbines, turbine head, specific Construc principle Francis a Draft types,	ation of hydraulic Selection of on the basis of discharge and speed,	teaching, demo	elassroom nstration, gnments,	Students will processes the discussion teacher on provided by to random quiz them.	rough the with the content eacher and	15		00		F	PPT,		chalk book,		
				SC	CHEME OF A	SSESSME	NT									
S. No.	Meth	od of Assessment	Descript	ion of Ass	essment	Maximu Marks				R	lesou	irces	s Req	uired		External / Internal
			Student will construction, criteria of a gi	working a ven turbine	and selection	10										
1		Theory exam	Student will function, cons a draft tube.		1	06			Q	uest	tion p	paper	r + Ra	ting sca	le	External
			ADDITIONA	L INSTRI	JCTIONS FO	R THE HO) D/ F		ULT	Y (I	FAN	NY)				

R	GPV (Dir	oloma Wing) Bhop	al	SCHEME FO		G Bran	ch Cod	e Course	Code	CO Code	LO Code	Format No. 4
		, g) 2p		OUTO	COME	M	0	2 4 0	2	4	2	
	URSE ME	Fluid Mechanics	& Hydrau	lic Machinery						1		
CO Des	scription	Select a suitable h	ydraulic	turbine for a give	en situation.							
LO Des	scription	Calculate work done	, power, eff	iciency of a given tu	urbine.							
					SCHEME O	F STUDY						
S. No.	Lea	rning Content		ng –Learning Method	Description Proce	ess	Teach Hrs.	Pract. /Tut Hrs.]	LRs Requ	ired	Remarks
1	on we efficiency Reaction	numerical problems ork-done, Power, y of Impulse and turbines, Layout electric power plant.	Interactiv teaching, quiz, tutorial.	e classroom demonstration, assignments,	Students will processes the discussion teacher on provided by t random quiz them.	rough the with the content eacher and	06	00	boar	douts, rd, PPT, te ts, video f	,	
				SC	HEME OF AS	SSESSMEN	T					
S. No.	Meth	od of Assessment	D	escription of Asse	essment	Maximun Marks	n	Resou	rces Re	equired		External / Internal
1]	Theory Exam		will be asked to ne, power, efficienc		10		Question p	aper +]	Rating sca	le	External
			ADDIT	IONAL INSTRU	CTIONS FOR	R THE HOI	D/ FACU	JLTY (IF AN	NY)			
					Part of Theo	orv Exam						

R	GPV (Din	loma Wing) Bhop	al	SCH		DR LEARNIN	G	Brai	ıch C	ode	Cour	se Co	ode	CO Code	LO Code	Format No. 4
	(-	······································			OUI	COME		М	0	2	4	0	2	4	3	
	JRSE ME	Fluid Mechanics	& Hydra	ulic Mach	inery		I		1	1	· · · · ·				1	
CO Des	cription	Select a suitable h	nydraulic	turbine fo	or a give	en situation.										
LO Des	cription	Identify componen	nts of a giv	ven turbine	Э.											
		1				SCHEME OF	STUDY									
S. No.	Lear	rning Content		ing –Lear Method	ning	Description Proces			each Irs.		act. t Hrs.		LR	s Requir	·ed	Remarks
1		ration of nts of Pelton wheel, nd Kaplan turbine.			lab quiz,	Teacher demonstrate procedure of l The students y through practi	vill learn ce.	0	0		09	boa cha	· ·	PT, text video	-	
	1				SC.	HEME OF AS	SESSME	NT								1
S. No.	Metho	od of Assessment	D	escription	of Asse	essment	Maximu Marks				Resou	rces	Req	uired		External / Internal
1		ooratory test by observation		nt will be as on and cons ubes.			10		Obs	servati	on sch /rating					External
			ADDIT	IONAL I	NSTRU	CTIONS FOR	THE HO)D /]	FACI	JLTY	(IF Al	NY)				
						Part of Practic	al Exam									

RGPV (Diploma Wing) Bhopal COURSE NAME Fluid Mechanics &			SCHEME FOR LEARNING			B	Branch Code				se (Code	CO Code	LO Code	Format No. 4
				OUTCO	ME	M		0	2	4 0 2		2	5	1	-
			& Hydraulic	& Hydraulic Machinery						I			1		1
CO Des	scription	Describe different	hydraulic p	umps for a giver	n situation.										
LO Des	cription	Explain Principle, c	construction, w	orking and perfor	mance of cen	ntrifugal pun	ıp.								
				S	CHEME O	F STUDY	_								
S. No. Learning Content		rning Content		g –Learning ethod	Description of T-L Process			TeachPract.Hrs./Tut Hrs.			LRs Required			Remarks	
1	centrifuga casings Concept of Manomet done, Overall Calculati efficiency required Priming centrifuga of Slip	king and applications of rifugal pump, Types of ngs and impellers, cept of multistage pump, nometric head, Work- e, Manometric and erall efficiency. culations of overall			Students v processes discussion teacher provided b random qu them.	the the tent and by	09	00			boar	douts, d, PP c, charts			
	1			SCH	EME OF AS										1
S. No.	Meth	od of Assessment	Desc	ription of Assess	ment	nent Maximum Marks				Resou	rces	s Req	uired	External / Internal	
1	Т	Theory ExamStudent will be asked to principle, construction, work uses of centrifugal pump			-	10	10			Question paper + Rating				le	External
	1		ADDITIO	NAL INSTRUC	TIONS FOR	R THE HO	D/ F	FACUL	ГΥ (IF AN	VY)				1
					Part of Theo				· · ·	•					

RGPV (Diploma Wing) Bhopal COURSE NAME Fluid Mechanics & H			al	SCHEME FOR LEARNING OUTCOME draulic Machinery			Branch Code			Course Code			CO Code	LO Code	Format No. 4
			& Hvdra				M	0	2	4	0	2	5	2	
	ME scription		ifferent hydraulic pumps for a given situation .												
	cription	Explain Principle, co	·	1 1 0											
			nsti uctioi	· · · · ·	SCHEME OF		7								
S. No.	Lea	rning Content	Teach	ning –Learning Method	Description Proces	of T-L	Те	each Irs		ract. /Tut LR Hrs.		s Required		Remarks	
1	and	e, construction, and uses of single double acting ating pumps.		g, demonstration, signments,	Students wi the put through discussion w teacher on provided by and random taken by ther HEME OF AS	rocesses the vith the content teacher n quiz n.			00		P		ts, chalk xt book, lm.	· · · ·	
S. No.	Meth	od of Assessment	Γ	Description of Ass		Maxir Maxir Mar	num			R	esour	ces Re	equired		External / Internal
1	P	aper pen test	princi	nt will be asked ple, construction, f reciprocating put	working, and	10)		Question			iper +]	Internal		
	1		ADDIT	IONAL INSTRU	CTIONS FOR	THE H	OD/ I	FAC	ULTY	/ (IF	ANY	ľ)			1
					Part of Tern	n Work									

RGPV (Diploma Wing) Bhopal COURSE NAME Fluid Mechanics & I			al	SCHEME FOR LEARNING OUTCOME			Branch Code				Cours Code		CO Code	LO Code	Format No. 4
							M	0	2	4	0	2	5	3	
			& Hydra	k Hydraulic Machinery								1	1		
CO Des	cription	Describe differen	t hydrau	lic pumps for a g	iven situation.										
LO Des	cription	Measure overall eff	iciency of	f centrifugal pump											
					SCHEME OF	STUDY	ľ								
S. No.	Learning Content			ing –Learning Method	Description o Process			Teach Hrs.		Pract. /Tut Hrs.		LRs Require		ed	Remarks
1	Experimental determination of overall efficiency of a centrifugal pump.		Lab hands c assignm assignm	ents.	Teacher demonstrate procedure of lab The students wi through practice	ill learn e.	e		06		bo bo				
				SC	CHEME OF ASS	SESSM	ENT								
S. No. Method of Assessment			D	escription of Ass	essment	Maximum Marks			Resources Required						External / Internal
1		ooratory test by observation	overal	nt will be asked to measure ll efficiency of a centrifugal using a given experimental		10	10 Ot			on sc ratin		Internal			
			ADDIT	IONAL INSTRU			OD/	FAC	JLTY	(IF A	ANY)				
					Part of Lab	Work									