	•	IPLOM BHOPAI			RICULUM FOI COURSE	R	т3 в	heet No.
Branch			C	Cement Technology		Semester		IV
Course C	Code	40	1	Course Name	Machine drawi	ng and Comp Drafting	outer Aid	led
Course	Outco	ome 1		ibe Projection, Mulinal views.	ti view representation	and	Teach Hrs	Marks
Learning	g Outco	ome 1	Descri	ibe concepts multi-view represe	of projection entation.	s and	1+4	05
Co	ontents		superf conver	luous view, choice	projection. First a of views, auxiliary v views in to orthogon.	iews- views	-full an	d partial,
							3+7	10
Learning	g Outco	ome 2	-	in Sectional views.				
C	ontents	S	section Hatchi views	n, removed section, ing procedure for di of assembled parts.	tion, half section, partional offset section. Section offset section. Section offset section if from IC engage 1st angle projection	ing convention IS code 686 ine parts, co	ons, sect 5 1972. S	ion lines. Sectional
Method o	of Asse	ssment		ng Examination				1
Course	Outco	ome 2	symbo	ols	ance, machining and v	velding	Teach Hrs	Marks
Learning	g Outco	ome 1	Draw	concepts of dimens	ioning and tolerance.		2+5	10
C	ontents	8	(Use of hints of arcs of	of I.S.Code 696 &2 on dimensioning systems of circle narrow space	ze and location) dimed 2709) general rules for stems of dimensioning e, angles, counter sunk (Use I.S. Code 696)	or dimension . Dimension	ing and of cyline	practical der holes
Method o	of Asse	ssment	Assign					
Learning	g Outco	ome 2	Draw	different machining	and welding symbols		2+6	10
C	ontents	S	figures (circul welde	s and notes for s larity, angularity e d joints, welding sy wing fits, limits, siz	marks, countersinking ame. Representation tc.) (Ref IS 969). R mbols, tolerance of fo e, tolerance, clearance	of character epresentation orms and pos	istics m of rive itions. P	achining eted and rocedure
Method o	of Asse	essment	Drawi	ng Examination				
Course	Outco	ome 3	Prepar	e a Production drav	ving.		Teach Hrs	Marks
Learning	g Outco	ome 1	Explai	in detailed drawings	S.		1+4	10
C	ontents	S		ed drawing, assemble tool list, gauge list	oly drawing, scale, fin	ish tolerance	es, notes	etc. Title
Method o	of Asse	essment	Paper	Pen Test				

Learning Outcome 2	Draw given views of machine components and their Assemblies on drawing sheets.	9+21	40
	Assembles of drawing sheets.		
Contents	Preparation of production drawing for pattern shop, forging shop, preparation of assembly drawing from detailed drawiews, sectional pictorial views, plummer block, flange or pulleys, foot-step bearing, universal coupling, connecting result. C. engines, cotter joint and knuckle joint. Preparation of from assembly drawings and assembled pictorial views, production drawing	wing. Eoupling, od and pdetailed	exploded stepped piston of drawing
Method of Assessment	Drawing Examination		
Course Outcome 4	Draw different components of a Pipe line.	Teach Hrs	Marks
Learning Outcome 1	Draw symbols used in pipe drafting.	2+1	05
Contents	Symbols used in pipe line work as per IS code of practice.		
Method of Assessment	Drawing Examination.		
Learning Outcome 2	Draw various joints/bends/ pipe supports in pipe drafting.	2+2	10
Contents	C.I. flanged joint, socket and spigot joint, gland and expansion joint, pipe fitting typical pipe bends, pipe accessories.	_	
Method of Assessment	Drawing Examination.		
Course Outcome 5	Construct individual and assembly drawing using a CAD Software.	Teach Hrs	Marks
Learning Outcome 1	Execute draw and modify commands used in CAD software.	2+4	10
Contents	Coordinate system, Draw command-line, arc, circle rectangle ellipse, hatch. erase, copy, offset, array, trim, extend, breal fillet, move, rotate, scale, stretch, lengthen. Dimensioning Tragrid, ortho, polar, osnap	k, join, o	chamfer,
Method of Assessment	Lab work		
Learning Outcome 2	Execute format and construction commands used in CAD software.	2+4	10
Contents	Format commands: line type, point style, units, layers, dimension style, text and text styles, formatting dimension ultileader style		-
Method of Assessment	Lab work		
Learning Outcome 3	Construction of drawing using CAD.	5+16	30
Contents	Practice of assembly drawings using CAD, block, creating lay plotting/printing.	out, inse	ert layout
Method of Assessment	Laboratory test by observation		

F	RGPV (Diplo	oma Wing ) Bhopa	1	SCHEME FOR LI	EARNING (	OUTCOME	Bran	ch (	Code	Cou	rse (	Code	CO Code	LO Code	
						(	$\mathbb{C}$	0	1	4	0	3	1	1	Format No. 4
COUR	SE NAME	Machine drawing	and Com	puter Aided Draftir	ng									1	
CO Des	scription	Describe Projection	on, Multi	view representation	n and Section	al views.									
LO Des	cription	Describe concepts	s of proje	ctions and multi-vie	ew representa	ation.									
					SCHEME (	OF STUDY									
S. No.	I	Learning Content		Teaching – Learning Method	_	otion of T-L	Tea Hr			ice /Tu		LRs	Require	d	Remarks
1	First and the superfluous auxiliary viconversion orthographic	orthographic projection angle projection view, choice of views - full an of pictorial views in c views, convention as per IS:	ews, d partial, n to	Interactive Classroom teaching, demonstration, Quiz, Assignments.	contents and handouts to Teacher when Assignment quiz/praction	o students. ill conduct nts/ .ce sessions to ents practice	1			4	bo bo	oard, l ook, c	its, chal PPT, Te harts, vi cture.	ext	
				SC	HEME OF A	ASSESSMEN	T								
S. No.	Method	of Assessment	De	escription of Assess	sment	Maximum Marks				Resou	rces ]	Requi	red		External / Internal
1	Pap	er pen test		nt will be asked t s of projections and ntation.		05			Те	st pape	er + F	Rating	scale		Internal
	<u> </u>	Al	DDITION	IAL INSTRUCTIO	NS FOR TH	E HOD/ FACU	JLTY	(IF	ANY	)					
					Par	t of progressiv	e exa	m-1							

	RGPV (Diploma W	ing ) Bhopal	SC	CHEME FOR LEAR OUTCOME	NING	Bra	nch C	ode	Cou	rse C	ode	CO Code	LO Code	
						С	0	1	4	0	3	1	2	Format No. 4
COUR	SE NAME M	Iachine drawin	g and Computer	Aided Drafting	'									1
CO Des	cription D	escribe Project	tion, Multi view 1	representation and Sec	tional views.									
LO Des	cription E	xplain Sectiona	al views.											
				SCHEME OF	STUDY									
S. No.	Lea	arning Content		Teaching – Learning Method	Description Proce		T-L	Teac Hrs.		Pract. 'ut Hrs	. L	Rs Req	uired	Remarks
1	Sectional Views: F or broken section, re- section, offset section section lines. Hatch materials as per IS of of assembled parts. parts, couplings, clu- Use 1st angle projection	Teacher will the contents provide hand students. Tea conduct Ass practice sess make studen their knowle	and douts ache ignn sions ats pr	s to er will nents/ s to ractice	03	0	7	ch PI bo	andouts alk boa PT, Tex ook, vic m/ lect	ard, at leo				
				SCHEME OF AS	SESSMENT	ı								
S. No.	Method of As	sessment	Descriptio	n of Assessment	Maximum Marks	1		Res	sour	ces Re	quire	ed		External / Internal
1	Drawing Examinati	on	given sectiona	be asked to draw a all view with front/top f a given part.	10		QUES'	TION F	PAP	ER + I	RAT	ING SO	CALE	External
		ADDI	TIONAL INSTR	UCTIONS FOR THE	HOD/ FACU	LTY	Y (IF A	NY)						
				Part of Theory Exam										

F	RGPV (Diplo	ma Wing ) Bhopal	SCHEMI	E FOR LEARNING	G OUTCOMI	E Bra	anch (	Code	Cou	rse C	Code	CO Code	LO Code	
						С	0	1	4	0	3	2	1	Format No. 4
COUR	SE NAME	Machine drawing and	Computer Ai	ded Drafting										1
CO Des	cription	Draw dimensioning, to	lerance, mac	chining and welding	symbols									
LO Des	cription	Draw dimensions and t	olerances on	given sketch										
	I			SCHEME	OF STUDY									
S. No.		Learning Content		Teaching – Learning Method	Description Proc		'-L	Teach Hrs		Praction of the Practic Practi		LRs Require		Remarks
1	dimensioni I.S.Code 69 dimensioni dimensioni Dimension narrow spa threads tape	mensions (size and local ng terms and notations. (96 &2709) general rules ng and practical hints on ng systems of dimension of cylinder holes arcs of ce, angles, counter sunk let etc. Application of (Use I.S. Code	use of for ing. circle	Interactive Classroom teaching, demonstration, Quiz, Assignments.	Teacher wi the contents provide har students. To conduct As quiz/ practi sessions to students pra their knowl	s and douts eacher signment ce make actice	to will	02		05	cl P b	Iandouts halk boa PT, Tex ook, cha ideo film ecture.	ard, at arts,	
	1			SCHEME OF	ASSESSME	NT								
S. No.	Method o		Description o	f Assessment		Maxin Maı			Res	source	es Red	quired		External / Internal
1	Assignmen	dimensioning w	th the help o ill be asked t	to draw dimensions		10				Rubr	ics/ra	ting scal	les	Internal
				RUCTIONS FOR T	THE HOD/ FA	CULT	TY (IF	ANY)						
					Part of Tern	n work	<u> </u>							

	RGPV (Diploma	Wing ) Bhopal		SCHEME FOR OUTCO		NING	Br	anch Co	ode	Cou	irse (	Code			LO Code	
							C	0	1	4	0	3	2		2	Format No. 4
COURS	SE NAME	Machine drawing	and Com	nputer Aided Drafting	g											
CO Des	cription	Draw dimensioning	ng, tolera	nce, machining and v	welding	symbols										
LO Des	cription	Draw different ma	achining	and welding symbols	S											
				SCHE	ME OF	STUDY										
S. No.	Lea	rning Content		Teaching – Learning Method		iption of T-L Process	,	Teach Hrs.		ict. /T Hrs.	ut	LF	Rs Req	uire	d	Remarks
1	countersinking, of figures and notes Representation machining (circuits 969). Represented joints, wo forms and post Procedure of descriptions.	of characteristy, angularity essentation of rive yelding symbols, to sitions.  Irawing fits, limit rance etc. Proceeds	eteristics etc.) (Ref eted and olerance tts, size,	Interactive Classroom teaching, demonstration, Assignments.	the cor provid studen will co Assign practic make s practic knowle	ments/ e sessions to students e their edge.	)	02	Oc	5	bo bo	oard ook,	outs, control outs, charts ecture.	Tex , vid	t	
				SCHEME	OF AS	SESSMENT										
S. No.	Method of	Assessment	Des	cription of Assessme	ent	Maximum Marks			R	Resou	rces F	Requ	iired			External / Internal
1	Drawing Examin	nation		will be asked to drawng and five welding	v five	10		QUEST	ΓΙΟΝ	I PAI	PER +	· RA	ATING	SC	ALE	External
	<u> </u>	ADDIT	TONAL I	NSTRUCTIONS FO	R THE	HOD/ FACU	JL7	ΓΥ (IF A	NY)							1
				Part o	of Theor	y Exam										

R	GPV (Diplor	ma Wing ) Bhopal	SC	CHEME FOR LEAR	NING C	OUTCOME	Bra	nch Co	ode	Cour	rse C	ode	CO Code	LO Cod	
						-	С	0	1	4	0	3	3	1	Format No. 4
COUR	SE NAME	Machine drawing	and Com	puter Aided Drafting		'									'
CO Des	cription	Prepare a Produc	tion drawi	ng.											
LO Des	cription	Explain detailed	drawings.												
				SCH	IEME O	F STUDY									
S. No.	1	Learning Content		Teaching – Learning Method	-	ption of T-L Process	,	Teach Hrs.		ct. /Tu Hrs.	t	LRs	s Requi	red	Remarks
1	scale, finish	awing, assembly dr tolerances, notes e list, gauge list		Interactive Classroom teaching, demonstration, Quiz, Assignments, Tutorial.	the conprovide students conduction quiz/pr	dge and	11 s/	01	04		boa	ırd, l ok, c	its, cha PPT, T harts v	ext	
				SCHEM	IE OF A	SSESSMEN	T		'						
S. No.	Method	of Assessment	Des	scription of Assessmen	nt	Maximum Marks			R	esourc	es Re	quir	red		External / Internal
1	Paper Pen T	Cest	deta	will be asked to outlined will be asked to outline wing.		10		(	Questi	ion paj	per +	ratin	ıg scale	<b>:</b>	Internal
	1	AΓ	DITIONA	L INSTRUCTIONS	FOR TH	E HOD/ FAC	CULT	ΓΥ (IF	ANY	)					1
				Part o	f progres	sive exam-2									

R	GPV (Diplo	oma Wing ) Bhopa	al SC	CHEME FOR LEAR	RNING OUTCOME	Bra	nch Co	ode C	Cou	rse Co		LO Code	,
						С	0	1 4	4	0	3 3	2	Format No. 4
COUR	SE NAME	Machine drawing	g and Comp	uter Aided Drafting									
CO Des	scription	Prepare a Produc	tion drawing	g.									
LO Des	scription	Draw given view	s of machin	e components and the	eir assemblies on drav	ving s	sheets.						
		1		SCH	HEME OF STUDY								
S. No.		Learning Content		Teaching – Learning Method	Description of T-L Process	1	Teach Hrs.	Pract. Hrs		I	LRs Requi	red	Remarks
1	pattern sho shop, prepa from detail sectional p block, flan foot-step b connecting engines, co Preparation assembly d	n of production dra p, forging shop, maration of assembly ed drawing. Explo- ictorial views, plur ge coupling, steppe earing, universal corod and piston of otter joint and knuch of detailed drawing lrawings and assem ews, Interpretation drawing	achine y drawing ded views, mmer ed pulleys, oupling, I.C. ekle joint. ng from abled	Interactive Classroom teaching, demonstration, Assignments.	Teacher will explain the contents and provide handouts to students. Teacher w conduct Assignment practice sessions to make students practice their knowledge and drawing skill.	ill ts/	09	21		boar	douts, cha d, PPT, To k, charts, v	ext	
				SCHEM	IE OF ASSESSMEN	T							
S. No.	Method	of Assessment	Des	cription of Assessme	nt Maximum Marks			Reso	our	ces Rec	quired		External / Internal
1	Drawing E	xamination		vill be asked to draw a n drawing for a given nt.			Qī	UESTIO	N I	PAPER SCA	A + RATIN	ſĠ	External
	1	A	DDITIONA	L INSTRUCTIONS	FOR THE HOD/ FAC	CUL	ΓΥ (IF	ANY)					
				Par	rt of Theory Exam								

R	GPV (Diplor	ma Wing ) Bhoj	pal	SCHEME FO	OR LEARNING O	OUTCO	ME B	ran	nch Co	ode	Cor	urse (	Code	CO Code	LO Code	
							C		0	1	4	0	3	4	1	Format No. 4
COUR	SE NAME	Machine drawi	ng and Co	mputer Aided	Drafting		'						'			
CO Des	scription	Draw different	componer	nts of a Pipe li	ne.											
LO Des	cription	Draw symbols	used in pi	pe drafting.												
					SCHEME (	OF STU	DY									
S. No.	Learni	ng Content		nching – ng Method	Description of T	Γ-L	Teach Hrs.	P	Pract. / Hrs.			LRs ]	Requir	ed		Remarks
1	Symbols us work as per practice.	ed in pipe line IS code of	Interacti teaching demonst Assignn	ration,	Teacher will explacements and provide handouts to student Teacher will conduct Assignment practice sessions to make students practice their knowledge.	ide nts.	02	03	Hrs. LRs Required							
					SCHEME OF A	ASSESS	SMENT	Γ							ı	
S. No.	Method	of Assessment	I	Description of	Assessment		imum arks			R	Resou	rces F	Require	ed		External / Interna
1	Drawing Ex	xamination			ed to draw any two supports in pipe ing.	0:	5	Q	QUEST	ΓΙΟΝ	I PAF	PER +	RAT	ING SC	CALE	External
			ADDITIO	ONAL INSTR	UCTIONS FOR TI	НЕ НОГ	D/ FAC	ÜL7	TY (IF	AN	Y)					
					Part of The	eory Exa	am									

R	GPV (Dip	ploma Wing ) Bhop	pal	SCHEME FO	OR LEARNING O	<b>)UTCO</b>	ME !	Bra	anch Co	ode	Co	ourse	Code	.		LO Code	
								С	0	1	4	1 0	) 3	3 4	4	2	Format No. 4
COURS NAME		Machine drawing	and Com	puter Aided Dr	rafting							<u>.</u>	<u>.</u>				
CO Des	scription	Draw different con	mponents	of a Pipe line.													
LO Des	scription	Draw joints/bends	s/ pipe sur	ports in pipe c	drafting												
					SCHEME (	OF STU	J <b>DY</b>										
S. No.	Lea	rning Content		aching – ng Method	Description of T	Γ-L	Teach Hrs.		Pract. // Hrs.			LRs	Requ	iired			Remarks
1	and spigo stuffing b joint, pip	ged joint, socket ot joint, gland and box, expansion be fitting typical ds, pipe supports essories.	Interacti teaching demons Assignm	stration,	Teacher will explated contents and provious to student Teacher will conduct Assignment practice sessions to make students practice their knowledge.	ride nts. ents/	02		02		LRs Required  Handouts, chalk board, PPT, Text book, charts, video film, virtual lab.						
					SCHEME OF A	ASSESS	SMEN	1T									
S. No.	Metho	od of Assessment	]	Description of	Assessment		kimum arks			R	lesoi	urces ]	Requi	ired			External / Interna
1	Drawing	g Examination			ed to draw any two supports in pipe ing.		10	(	QUEST	ΓΙΟΝ	I PA	PER -	+ RA	TING	sc <i>A</i>	ALE	External
			ADDITI	ONAL INSTR	RUCTIONS FOR TH	НЕ НОІ	D/ FAC	ZÜL	TY (II	FAN	<u>Y)</u>						
					Part of The	eory Ex	am										

R	GPV (Dip	oloma Wing ) Bhopa	S	CHEME FOR LEAR	NING OUTCOME	Bra	anch Co	ode	Cour	se C	Code	CO Code	LO Code	
						С	0	1	4	0	3	5	1	Format No. 4
COURS	_	Machine drawing ar	d Compu	ter Aided Drafting										
CO Des	cription	Construct individual	and asse	mbly drawing using a C	AD Software									
LO Des	cription	Execute draw and m	odify con	nmands used in CAD so	oftware.									
				SCHI	EME OF STUDY									
S. No.		Learning Content		Teaching – Learning Method	Description of T Process	L	Teach Hrs.		ct. /Tu Hrs.	t	LRs	s Requi	red	Remarks
1	line, arc, point, ell array, tri chamfer, stretch, l Dimension	ate system, Draw com circle rectangle, poly ipse, hatch. erase, cop m, extend, break, join fillet, move, rotate, se engthen. oning Tray settings: so no, polar, osnap	gon, y, offset, cale,	Interactive Classroom teaching, demonstration, Quiz, Assignments.	Teacher will explate the contents and provide handouts students. Teacher conduct Assignments/ quiz practice session on computer.	co will	02		04	b b fi	oard, ook,	uts, cha PPT, T charts, CAD lab	ext video	
				SCHEMI	E OF ASSESSME	NT								
S. No.	Meth	od of Assessment	De	scription of Assessment	Maximu Marks			R	esourc	es R	equir	ed		External / Internal
1	Lab worl	k	any	nt will be asked to execute twelve commands uses software.			QUEST	ΓΙΟΝ	PAPE	ER +	RAT	ING SO	CALE	Internal
		АΓ	DITION	AL INSTRUCTIONS F	OR THE HOD/ FA	CUL	TY (IF	ANY	()					

Part of Lab Work

R	GPV (Diplo	oma Wing ) Bho	opal SCHEME FO	R LEARNING OUTCO	)ME B	ranch Co	ode	Cou	irse C	ode	CO Code	LO Code	
					C	0	1	4	0	3	5	2	Format No. <b>4</b>
COUR	SE NAME	Machine drawi	ng and Computer Aided D	rafting	'	'			-				
CO Des	scription	Construct indiv	vidual and assembly drawing	ng using a CAD Software	e								
LO Des	cription	Execute format	t and construction comman	ds used in CAD software	e.								
				SCHEME OF STU	DY								
S. No.	Learn	ing Content	Teaching — Learning Method	Description of T-L Process	Teach Hrs.	Pract. / Hrs.			LRs R	Requir	ed		Remarks
1	type, point layers, dra- dimension and text sty formatting	style, text	Interactive Classroom teaching, demonstration, Assignments.	Teacher will explain the contents and provide handouts to students. Teacher will conduct Assignments/ practice sessions on computer.	02	04		PPT,	, Text ts, vid	book eo fil	-		

## SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal		
1	Lab work	Student will be asked to execute any ten commands using CAD software.	10	QUESTION PAPER + RATING SCALE	Internal		

## ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Part of Lab work

RGPV (Diploma Wing ) Bhopal			SCHEME FOR LEARNING OUTCOME		ME B	<b>Branch Code</b>			<b>Course Code</b>				LO e Cod			
							(		0	1	4	0	3	5	3	Format No. 4
COURSE NAME   Machine drawing and Computer Aided Drafting									ı							
CO Description Construct individual an			idual and	assembly drawing	ing using a CAD	Software	2									
LO Des	cription	Construction of	drawing	using CAD.												
		1			SCHEME C	F STUE	ΡΥ									
S. No.	Learni	ng Content	Teaching – Learning Method		1		Teach Hrs.	Pract. /Tut Hrs.		LRs Required				Remarks		
1	Practice of assembly drawings using CAD, block, creating layout, insert layout, plotting/printing.		Interact teaching demons Assignr	tration,	Teacher will explain the contents and provide handouts to students. Teacher will conduct Assignments/ practice sessions on computer.		05		16		Handouts, chalk board, PPT, Text book, charts, video film, CAD lab with plotter.			k, lm,		
					SCHEME OF A	SSESSN	MENT									
S. No.	Method	Method of Assessment			Description of Assessment		imum rks	Resources Required						External / Internal		
1		boratory test by observation  Student will be a assembly drawing software for a given			ing a CAD 30			Observation schedule/check-lis					t /ratir	External		
	1	A	DDITIO	NAL INSTRUC	CTIONS FOR TH	IE HOD/	FACU	LT	Y (IF	ANY	<u>()</u>					I
					Part of Prac	tical Exa	m									