RGPV ((DIPLC BHO		ING)		CULUM FOR THE DURSE	FORMAT-3			Sheet No. 1/3
Branch		N	IECHA	NICAL ENGINE	ERING	Semester		III	
Course (Code	30	1	Course Name	I	Manufacturing	g Proces	ses	
Course C	Dutcom	e 1	Expla	in conventional m	anufacturing processe	25.		Teach Hrs	Marks
Learning	g Outco	ome 1	Descri	be principle of met	al working, casting, me	etal joining, and press working pr	ocesses.	10	10
Contents	5		Princij workii		on of basic manufacturi	ing processes metal working, re-c	crystallizatio	I on, casting, meta	l joining and press
Method	of Asse	ssment	Paper	pen test					
Learning	g Outco	ome 2	Select	suitable manufactu	ring process for a given	n job.		10	10
Contents			Factor	s influencing select	ion of metal working, r	e-crystallization, casting, metal j	oining and	press working.	
Method of Assessment			Theory	y exam					
Course C	Dutcom	ie 2	Select	a suitable casting	method for a given jo	b.		Teach Hrs	Marks
Learning	g Outco	ome 1	Select	a suitable pattern f	or a given job.			7	10
Contents	5		Types	of patterns, materia	als and its application, a	allowances, tools required, color	code, select	ion of a pattern.	
Method of Assessment		ssment	Labora	atory test by observ					
Learning Outcome 2		ome 2	Explai	n process of metal		8	10		
Contents	5		Cupola	and properties of n a, crucible, pit and g process.	-		0 0 0		
Method	of Asse	ssment	Theory	y exam					

Learning Outcome 3	Explain die casting, centrifugal casting, investment casting and permanent mould casting.	5	10
Contents	Die casting, centrifugal casting, investment (lost wax) casting, permanent mould casting.		
Method of Assessment	Theory exam		
Learning Outcome 4	Make use of pattern, sand preparation and moulding with safety precaution in foundry shop.	10	10
Contents	Use of pattern and core, sand preparation and mould preparation.		
Method of Assessment	Laboratory test by observation		
Course Outcome 3	Identify a suitable metal working process for a given job.	Teach Hrs	Marks
Learning Outcome 1	Select a suitable mechanical working process for a given job.	5	10
Contents	Principle, types, applications and selection criteria of metal working-rolling, wire drawing, e	trusion, forging	processes.
Method of Assessment	Paper pen test		
Learning Outcome 2	Describe rolling, wire drawing, extrusion and forging processes.	10	10
Contents	Type and operations of metal working-rolling, wire drawing, extrusion, forging processes.		
Method of Assessment	Theory exam		
Learning Outcome 3	Identify suitable equipment for a given mechanical working processes.	5	10
Contents	Basic components of simple rolling mill, Type of rolling mill, die material and its application and their applications.	s. Wire drawing	, extrusion, forging
Method of Assessment	Theory exam		
Course Outcome 4	Explain press working.	Teach Hrs	Marks
Learning Outcome 1	Describe operations of press working.	10	10
Contents	Basic principle of press working, press working operations- punching, shearing, drawing, ber trimming, and piercing.	1 nding, slitting, kr	urling, notching,

Method of Assessment	Theory exam		
Learning Outcome 2	Describe dies, punches, press units.	10	10
Contents	Die and punch, types of dies, description and application of a simple press working unit,	double action press.	
Method of Assessment	Seminar presentation		
Course Outcome 5	Make use of metal joining processes for a given job.	Teach Hrs	Marks
Learning Outcome 1	Explain metal joining by arc welding, gas welding, soldering and brazing processes.	10	10
Contents	Welding:-Definition, classification, Weldability of metals. Resistance welding: Spot, sear Welding: Carbon arc, shielded metal arc, TIG, MIG, Submerged arc, Plasma arc Solderin and brazing processes its applications		-
Method of Assessment	Theory exam		
Learning Outcome 2	Make use of arc welding process for a given job.	8	10
Contents	Electrodes-types and selection, flux and their uses. Defects in welds and its remedies, joir aspects.	nts, testing and inspe	ection. Safety
Method of Assessment	Laboratory test by observation		
Learning Outcome 3	Make use of gas welding for a given job.	7	10
Contents	Operation and techniques of gas welding, Types of flames.		
Method of Assessment	Laboratory test by observation		
Learning Outcome 4	Follow safety precautions in welding shop.	5	10
Contents	Safety precaution in welding shop.		
Method of Assessment	Laboratory test by observation		

RG	PV (Diple	oma Wing) Bhopal		OR LEARNING ICOME		Branch					Code	CO Code	LO Code	Format No. 4
	URSE	Manufacturing P			M	1 0) 2		3	0	1	1	1	
	scription	Explain convention	onal manufacturing pro	cesses.										
	cription	_	of metal working, castin		ss wor	king pro	ocesses	•						
	-	1 1		SCHEME OF S		• • •								
S. No.	Lea	rning Content	Teaching –Learning Method	Description of T- Process	-L	Teach Hrs.		act. Hrs.		L	Rs Re	quired		Remarks
1	of basi processe re-crysta	s –metal working, llization, casting, pining and press	Interactive classroom teaching, demonstration, quiz, assignments, tutorial.	Teacher will explait the contents and provide handouts to students. Teacher w conduct assignmen quiz/tutorial to mak students practice th knowledge.	o will nts/ ke	8	2		P		ext bo	halk boar ook, chart	·	
				SCHEME OF ASS	ESSN	IENT								
S. No.	Meth	od of Assessment	Description of A	Assessment	Maxiı Maı			ł	Reso	ource	es Rec	quired		External / Internal
1	F	Paper pen test	Student will be ask explain types of m process	anufacturing	10	0		Te	st pa	aper	+ Rati	ng scale		Internal
	- -		ADDITIONAL INST	RUCTIONS FOR 7	гне і	HOD/ F	ACUI	LTY (l	IF A	NY)				
				Part of progres	ssive I	[

RG	GPV (Dipl	oma Wing) Bhopa	1		FOR LEARNIN	G	Bra	nch C	ode		Cours Code		CO Code	LO Code	Format No. 4
				0	UTCOME		M	0	2	3	0	1	1	2	
	URSE ME	Manufacturing P	rocesse	5			·								·
CO Des	cription	Explain convention	onal ma	nufacturing pro	cesses.										
LO Des	cription	Select suitable man	nufactur	ing process for a	given job.										
		1			SCHEME O	F STU	DY								
S. No.	Lear	rning Content	Teach	ning –Learning Method	Description of Process	T-L	Teach Hrs.		ract. t Hrs.	•	LF	Rs Re	equired		Remarks
1	re-crysta	influencing of metal working, llization, casting, pining and press	teachir	stration, quiz, ments,	Teacher will exp the contents and provide handout students. Teache conduct assignm quiz/tutorial to n students practice knowledge.	s to r will ents/ nake	8	2			Hando board,	· · ·	halk text boo	ok.	
			·		SCHEME OF A	SSESS	MENT								
S. No.	Meth	od of Assessment		Description of A	ssessment		kimum arks			Res	source	s Re	quired		External / Internal
1	-	Гheory exam	facto manu	ent will be asked ors influencing sel afacturing process cation.	ection of		10		Que	stio	n pape	er + R	Rating sca	ale	External
			ADD	ITIONAL INST	RUCTIONS FOI	R THE	HOD/ H	FACU	LTY	(IF	ANY)				
					Nil										

RGP	V (Diplom	a Wing) Bhopal	SCHEME FOR		Brai	nch Co	ode	C	ourse (Code	CO Code	LO Code	Format No.
_		8 , 1	OUTCO	OME	M	0	2	3	0	1	2	1	4
	URSE ME	Manufacturing P	rocesses		1	1		1		1			1
CO Des	scription	Select a suitable c	asting method for a giv	en job.									
LO Des	cription	Select a suitable pa	attern for a given job.										
		1		SCHEME OF	STUDY	7							
S. No.	Lear	rning Content	Teaching –Learning Method	Description of T-L Process	Teach	Hrs.	Pra /Tut		I	Rs Ro	equired	R	emarks
1	and its ap allowanc	patterns, materials oplication, es, tools required, le, selection of a	Lab assignments, presentation, lab demonstration, hands on practice.	Teacher will conduct lab assignments to make students practice their knowledge. Teacher will demonstrate the procedure of lab experiments. The students will learn through practice.	03		04		board	louts, c l, char virtua	ts, video		
			·	SCHEME OF AS	SESSMI	ENT							
S. No.	Metho	od of Assessment	Description of A	Assessment	Maxim Mark				Resou	irces I	Required		External / Internal
1		poratory test by observation	Student will be asked suitable pattern for a g		10				Rubri	cs/Rat	ing scale		Internal
			ADDITIONAL INST			OD/ F	ACUL	TY (I	F ANY	ľ)			
				Part of Lab	work								

Explain process of ing Content d properties of sand, bench and ilding methods,	rocesses asting method for the g	SCHEME O Description o Process Teacher will ex the contents and provide handou students. Teach conduct assignr quiz/tutorial to students practic	PF STUD of T-L s s s s plain d uts to ner will ments/ make	M 0 Y Teach Hrs. 05	2 Pract /Tut H 03		Hand	outs,	2 Required		Remarks
Explain process of ing Content d properties of sand, bench and ilding methods, d core prints, of gating system, rucible, pit and arc furnace, furnaces,	metal casting. Teaching –Learning <u>Method</u> Interactive classroom teaching,demonstration , quiz, assignments,	SCHEME O Description o Process Teacher will ex the contents and provide handou students. Teach conduct assignr quiz/tutorial to students practic	of T-L s splain d uts to ner will ments/ make	Teach Hrs.	/Tut H		Hand	outs,	-		Remarks
Explain process of ing Content d properties of sand, bench and ilding methods, d core prints, of gating system, rucible, pit and arc furnace, furnaces,	metal casting. Teaching –Learning <u>Method</u> Interactive classroom teaching,demonstration , quiz, assignments,	SCHEME O Description o Process Teacher will ex the contents and provide handou students. Teach conduct assignr quiz/tutorial to students practic	of T-L s splain d uts to ner will ments/ make	Teach Hrs.	/Tut H		Hand	outs,	-		Remarks
ing Content d properties of sand, bench and alding methods, d core prints, of gating system, rucible, pit and arc furnace, furnaces,	Teaching –Learning Method Interactive classroom teaching,demonstration , quiz, assignments,	Description o Process Teacher will ex the contents and provide handou students. Teach conduct assignr quiz/tutorial to students practic	of T-L s splain d uts to ner will ments/ make	Teach Hrs.	/Tut H		Hand	outs,	-		Remarks
d properties of sand, bench and alding methods, d core prints, of gating system, rucible, pit and arc furnace, furnaces,	Method Interactive classroom teaching,demonstration , quiz, assignments,	Description o Process Teacher will ex the contents and provide handou students. Teach conduct assignr quiz/tutorial to students practic	of T-L s splain d uts to ner will ments/ make	Teach Hrs.	/Tut H		Hand	outs,	-		Remarks
sand, bench and alding methods, d core prints, of gating system, rucible, pit and arc furnace, furnaces,	teaching, demonstration , quiz, assignments,	the contents and provide handou students. Teach conduct assign quiz/tutorial to students practic	d uts to ner will ments/ make	05	03			,	chalk		
Area of n of casting		knowledge.							Γ, text bo leo film.	ook,	
	S	SCHEME OF A	SSESSM	1ENT							
l of Assessment	Description of A	ssessment	Maxin Mar			Res	source	s Ree	quired		External / Internal
eory exam			10)	Qu	estio	n pape	er + R	Rating sca	ale	External
	ADDITIONAL INSTR			HOD/ FA	CULTY	(IF	ANY)	1			
		ory exam job.	ory exam Student will be asked to describe the process of metal casting for a given job. ADDITIONAL INSTRUCTIONS FOR	Main ory exam Student will be asked to describe the process of metal casting for a given job.	Marks ory exam Student will be asked to describe the process of metal casting for a given job. ADDITIONAL INSTRUCTIONS FOR THE HOD/ FA	Marks ory exam Student will be asked to describe the process of metal casting for a given job. 10 Que ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY	Marks Ory exam Student will be asked to describe the process of metal casting for a given job. 10 Question ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF	Marks Marks ory exam Student will be asked to describe the process of metal casting for a given job. 10 Question pape ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)	Marks Marks Student will be asked to describe the process of metal casting for a given job. 10 Question paper + F ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)	Marks ory exam Student will be asked to describe the process of metal casting for a given job. ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)	Marks Marks ory exam Student will be asked to describe the process of metal casting for a given job. 10 ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RG	PV (Diplo	oma Wing) Bhopa	I SCHEME FOI		B	ranch C	ode	Co 3	urse (Code	CO Code 2	LO Code 3	Format No. 4
	URSE ME	Manufacturing P	rocesses					5	U	1		5	
CO Des	scription	Select a suitable of	casting method for the give	en job.									
LO Des	cription		g, centrifugal casting, invest		1		ild cas	ing.					
S. No.	Lear	ming Content	Teaching –Learning Method	Description Proce		Teach Hrs.	Pra /T H	ut]	LRs F	Required	l	Remarks
1	casting,	sting, centrifugal investment (lost asting, permanent asting.	Interactive classroom teaching, demonstration, quiz, assignments, tutorial.	Teacher will the contents provide hand students. Tea will conduct assignments/ quiz/tutorial students prac their knowled	and outs to icher to make tice	05			boar	d, PP	, chalk T, text bo leo film.	ook,	
			SC	CHEME OF AS	SESSM	ENT							
S. No.	Metho	od of Assessment	Description of Ass		Maxim Mark	um		Re	sourc	es Re	quired		External / Internal
1	1 Theory exam		Student will be asked to method of casting.	describe one	10	10		Question		on paper + Rating scale			External
			ADDITIONAL INSTRU	UCTIONS FOR	R THE H	OD/ FA	CULT	Y (II	F ANY	()			
				Nil									

R	GPV (Dir	oloma Wing) Bhop	al		FOR LEARNIN	G	Brar	nch C	ode	Cour	se C	ode	CO Code	LO Code	Format No. 4
	` •			Û	UTCOME		М	0	2	3	0	1	2	4	
	URSE ME	Manufacturing P	rocesses					1					1		1
CO Des	scription	Select a suitable c	casting m	ethod for the gi	ven job.										
LO Des	scription	Make use of patter	rn, sand pr	reparation and m	oulding with safe	ty precaut	tion i	n fou	ndry s	shop.					
		1			SCHEME OI	F STUDY	7								
S. No.	Lea	rning Content		ng –Learning Method	Description Proces			each Irs.		ract. t Hrs.		LR	s Requi	red	Remarks
1	sand pre	attern and core, paration and reparation.		tion, onstration, o practice.	Teacher will demonstrate the procedure of lat experiments. Th students will lea through practice	b ne arn	02		08		boa	ard, o	its, chalk charts, vi rtual lab	ideo	
				S	CHEME OF AS	SESSME	ENT								
S. No.	Meth	od of Assessment	D	escription of As	ssessment	Maxim Mark				Resou	irces	Rec	luired		External Internal
1	La	boratory test by observation		t will be asked t using a given pa	1 1	10		O	bserva		hedul ale /		neck-list ics	/ rating	External
			ADDIT	IONAL INSTR	CUCTIONS FOR	THE HO	OD / 1	FACI	ULTY	(IF A	NY)				
					Part of Externa	l Practica	l								

R	GPV (Dij	oloma Wing) Bhop	bal		OR LEARNING COME	Bra	anch	Code	Cou	irse C	Code	CO Code	LO Code	Format No. 4
	_				COME	M	0	2	3	0	1	3	1	
	URSE ME	Manufacturing P	rocesses											
CO Des	scription	Identify a suitabl	le metal w	orking process fo	or a given job.									
LO Des	cription	Select a suitable n	nechanical	working process	for a given job.									
					SCHEME OF	STUDY								
S. No.	Lea	rning Content	Teach	ing –Learning Method	Description Proces			each Irs.	Pra /Tu Hr	ıt	Ι	.Rs Requ	ired	Remarks
1	criteria o rolling, v	ons and selection of metal working- wire drawing, h, forging	teaching	ve classroom , demonstration, signments,	Teacher will ex contents and pr handouts to stu Teacher will co assignments/ qu to make studen their knowledg	ovide dents. onduct uiz/tutorial ts practice	03		02		board	louts, cha 1, PPT, te s, video f	xt book,	
				S	CHEME OF AS	SESSMEN	JT							
S. No.	Meth	od of Assessment	Γ	Description of Ass	sessment	Maximu Marks	n		Res	sourc	es Re	quired		External / Internal
1	I	Paper pen test	select	nt will be asked to a suitable mechan ss for given selecti	ical working	10			Test j	paper	+ Rat	ing scale		Internal
	1		ADDI	FIONAL INSTR	UCTIONS FOR	THE HO	D/ FA	CUL	ΓY (IF	ANY)			1
					Part of progre	essive II								

<th a="" block="" column="" of="" structure="" t<="" th="" the="" while=""><th>2 Demorito</th></th>	<th>2 Demorito</th>	2 Demorito
NAME Manufacturing Processes CO Description Identify a suitable metal working process for a given job LO Description Describe rolling, wire drawing, extrusion, forging processes. S. No. Learning Content Teaching -Learning Method Description of T-L Process Teach Hrs. Pract. /Tut Hrs. LRs Required 1 Type and operations of metal working, extrusion, forging processes. Interactive classroom teaching, demonstration, quiz, assignments, tutorial. Teacher will explain provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their 08 02 Handouts, chalk boar PPT, text book, chart video film.		
LO Description Describe rolling, wire drawing, extrusion, forging processes. S. No. Learning Content Teaching -Learning Method Description of T-L Process Teach Hrs. Pract. /Tut Hrs. LRs Required 1 Type and operations of metal working-rolling, wire drawing, extrusion, forging processes. Interactive classroom teaching, demonstration, quiz, assignments, tutorial. Teacher will explain for ging provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their 08 02 Handouts, chalk boar provide handouts to students practice their		
S. No.Learning ContentTeaching –Learning MethodDescription of T-L ProcessTeach Hrs.Pract. /Tut Hrs.LRs Required1Type and operations of metal working-rolling, wire drawing, extrusion, forging processes.Interactive classroom teaching, demonstration, quiz, assignments, tutorial.Teacher will explain provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their0802Handouts, chalk boar PPT, text book, chart video film.		
S. No.Learning ContentTeaching -Learning MethodDescription of T-L ProcessTeach Hrs.Pract. /Tut Hrs.LRs Required1Type and operations of metal working-rolling, wire drawing, extrusion, forging processes.Interactive classroom teaching, demonstration, quiz, assignments, tutorial.Teacher will explain provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their0802Handouts, chalk boar PPT, text book, chart video film.	D	
S. No.Learning ContentMethodProcessHrs./Tut Hrs.Lks Kequired1Type and operations of metal working-rolling, wire drawing, extrusion, forging processes.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 their0802Handouts, chalk boar PPT, text book, chart video film.	D 1	
metal working-rolling, wire drawing, extrusion, forging processes.	Remarks	
Kliowicuge.		
SCHEME OF ASSESSMENT		
S. No. Method of Assessment Description of Assessment Maximum Marks Resources Required	Externa Interna	
1Theory examStudent will be asked to describe operations of one metal working process.Question paper + Rating sca	e Extern	
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)	I	
Nil		

RG	PV (Diplo	oma Wing) Bhopal		SCHEME FOR OUTCO			nnch Co				e Code	Code		Format No. 4
	URSE	Manufacturing P	rocesses			M	0	2	3) 1	3	3	
	ME				· · · · · · · · · · ·									
	cription cription	Identify a suitable		<u> </u>	<u> </u>									
LO Des	cription	Identify suitable eq	luipmen	t for a given mecha	SCHEME O		7							
			-						D					
S. No.	Lea	rning Content	Teac	hing –Learning Method	Description Proce		Teac Hrs		Pract /Tut H		L	Rs Requi	red	Remarks
1	rolling and its a drawing,	components of olling mill, Type of mill, die material applications. Wire extrusion, forging applications.	teachin	tive classroom g, demonstration, ssignments,	Teacher will e contents and p handouts to st Teacher will c assignments/ quiz/tutorial to students pract: knowledge.	orovide udents. onduct	03	(02		board,	outs, chal PPT, tex , video fi l lab.	at book,	
				S	CHEME OF A	SSESSM	ENT							
S. No.	Meth	od of Assessment		Description of As	sessment	Maxim Marl			R	lesou	irces R	equired		External / Internal
1	, r	Theory exam	sketc	ent will be asked h and describe ec e mechanical work	uipment used	10			Quest	tion	paper +	Rating s	cale	External
			ADD	ITIONAL INSTR			OD/ FA	CU	LTY (I	F Al	NY)			
					Nil									

R	GPV (Dij	oloma Wing) Bhopa	al	SCHEME FOR LEARNING OUTCOME			Branch Code			Co	Course Code		CO Code	LO Code	Format No. 4		
				00	ICOME		M	0	2 3 0 1 4 1								
	URSE ME	Manufacturing P	rocesses														
CO Des	scription	Explain press wor	·king.														
LO Des	cription	Describe operation	s of press	working.													
					SCHEME O	F STUDY											
S. No.	Lea	rning Content		ing –Learning Method	Description Proce		Tea Hı		Pra /Tu Hrs	ıt		L	Rs]	Require	d	Remarks	
1	Basic principle of press working, press working operations- punching, shearing, drawing, bending, slitting, knurling, notching, trimming, and piercing.		teaching,	ve classroom , demonstration, ignments,	Teacher will e contents and p handouts to st Teacher will c assignments/ quiz/tutorial to students pract knowledge.	orovide udents. conduct o make	e 07		03		Handouts, chalk board, PPT, text book, charts, video film, virtual lab.						
		· · · · · ·		S	CHEME OF A	SSESSME	NT										
S. No.	Meth	od of Assessment	D	escription of Ass	sessment	Maximu Marks				Re	sour	ces l	Req	uired		External / Internal	
1	1Theory examStudent will be asked two press working operations					10		Que			Question paper + Rating scale					External	
			ADDIT	TIONAL INSTRU	UCTIONS FO	R THE HO	D/F	FACU	JLTY	(IF	ANY	()					
										-							
					Ni	l											

R	RGPV (Diploma Wing) Bhopal COURSE NAME Manufacturing Proce			al SCHEME FOR LEARNING OUTCOME			Branch Code			rse C	Code	CO Code	LO Code	Format No. 4
							0	2	3	0	1	4	2	
				! 		I	1	1			1			
CO Des	scription	Explain press wo												
LO Des	cription	Describe dies, put	ss units.											
		·			SCHEME OF	STUDY								
S. No.	Lea	rning Content	Teacl	ning –Learning Method	Description Proce		Tea Hrs	-	/ Pract. Hrs		Ι	.Rs Requ	ired	Remarks
1	Die and punch, types of dies, description and application of a simple press working unit, double action press.		teaching		Teacher will e contents and p handouts to st Teacher will c assignments/ quiz/tutorial to students pract knowledge.	orovide udents. onduct o make ice their	07	C			boar chart	louts, cha d, PPT, te s, video f al lab.	xt book,	
				SC	CHEME OF AS									
S. No.	Meth	od of Assessment	I	Description of Ass	essment	Maximu Marks	n		Re	sour	ces Re	quired		External / Internal
1	Sem	inar presentation		nt will be asked to es or any press uni	-	10			Rı	ubrics	/Ratin	g scale		Internal
	·		ADDI	TIONAL INSTRU	UCTIONS FOR	THE HO	D/ FA	CUL	TY (IF	AN AN	Y)			·
					Part of tern	n work								

R	GPV (Dip	loma Wing) Bhopa	al		OR LEARNIN COME	IG I	Bran	ch C	ode	Cou	rse (Code	CO Code	LO Code	Format No. 4
		-		001	COME	İ	M	0	2	3	0	0 1 5 1			
	URSE ME	Manufacturing P	rocesses												
CO Des	cription	Make use of meta	l joining	processes for a gi	ven job.										
LO Des	cription	Explain metal joini	ing by arc	welding, gas weld	ling, soldering	and brazin	g pro	ocesse	es.						
					SCHEME O	F STUDY									
S. No.	Lear	ning Content		ing –Learning Method	Description Proce			ach rs.		ract. t Hrs.		LR	s Requi	red	Remarks
1	classifica of metals Resistance seam, but Gas weld Carbon a arc, TIG, arc, Plasr	e welding: Spot, t, projection. ling, Arc welding: rc, shielded metal MIG, Submerged na arc g, Brazing: Basic soldering and processes its	teaching	ve classroom , demonstration, ignments,	Teacher will the contents a provide hand students. Tea conduct assig quiz/tutorial t students prac knowledge.	and outs to cher will nments/ to make tice their	xplain 08 nd uts to her will ments/ o make				2 Handou board,		its, chalk PPT, text video fili lab.	t book,	
	1			SC	HEME OF A										
S. No.	Metho	od of Assessment	D	escription of Asse	essment	Maximu Marks	Recor					es Req	uired		External / Internal
1	heory evam			ethods of metal join	will be asked to describe any nods of metal joining 1				Que	estion	раре	er + Ra	ating sca	External	
			ADDIT	IONAL INSTRU	CTIONS FOI	R THE HO)D/ I	FACU	JLTY	(IF A	NY)			1
					Nil										

R	RGPV (Diploma Wing) Bhopal			SCHEME FOI OUTC		Bran	ch Cod	e	Cour	se C	Code	CO Code	LO Code	Format No. 4
		-		UUIC	UME	M	0	2	3	0	1	5	2	
	URSE ME	Manufacturing P	rocesse	2S										
CO Des	scription	Make use of meta	l joiniı	ng processes for a giv	ven job.									
LO Des	cription	Make use of arc we	elding	process for a given jo	b.									
					SCHEME O	F STUDY								
S. No.	Lea	rning Content	Те	eaching –Learning Method	-	tion of T-L	Teac Hrs.		Pract. /Tut Hi		L	Rs Requ	uired	Remarks
1	uses. De its reme	es-types and a, flux and their fects in welds and dies, joints, testing aspection. Safety	preser demo	ssignments, ntation, lab nstration, on practice.	assignment students pr knowledge Teacher wi the procedu experiment students wi through pra	actice their ill demonstrate ure of lab ts. The ill learn actice.	02		06		Handouts, chalk board, charts, video film, virtual lab.			
S. No.	Meth	od of Assessment		Description of Asse		SSESSMENT Maximum Marks			Resou	rces	s Req	uired		External / Internal
1	La	boratory test by observation	one	dent will be asked to method of arc weldin en job with safety pred	ng to make a	10	Obs	erva	ation sch sca		le/ ch rubri		' rating	External
	1		ADI	DITIONAL INSTRU	CTIONS FO	R THE HOD/ I	FACUI	.ΤY	Y (IF AN	Y)				1
					Part of externa	al practical								

R	GPV (Dir	oloma Wing) Bhopa	al		OR LEARNIN	G	Bran	ch C	ode	Coi	ırse (Code	CO Code	LO Code	Format No. 4
	COURSE NAME Manufacturing			OU ¹	ГСОМЕ		M	0	2	3	0	1	5	3	
		Manufacturing Pr	ocesses			I		I.		1	1		1	1	1
CO Des	scription	Make use of meta	l joining	processes for a gi	iven job.										
LO Des	cription	Make use of gas we	elding for	r a given job.											
		1			SCHEME O	F STUD	Y								
S. No.	Lea	rning Content		ing –Learning Method	Description Process		-	ach rs.	/	ract. Tut Hrs.		LRs	s Require	ed	Remarks
1	Operation and techniques of gas welding, types of flames.		presenta lab demo	onstration, a practice.	Teacher will c lab assignmen make students practice their knowledge. Teacher will demonstrate th procedure of 1 experiments. students will 1 through practi	ts to ne ab The earn ce.			05			andout arts, v tual la			
a 11						Maxii									External /
S. No.	Meth	od of Assessment	L	escription of Ass	essment	Mai				Re	sourc	es Re	quired		Internal
1		poratory test by observation		nt will be asked gas welding job.	to prepare a	1()	C	bserv	vation		dule/ c e / rubi	heck-list [.] ics	/ rating	External
			ADDI	TIONAL INSTRU	JCTIONS FOR	R THE H	HOD/	FAC	ULT	Y (IF	ANY	Z)			
					Part of externa	l practic	al								

R	GPV (Dip	loma Wing) Bhopa	ıl		FOR LEARNIN TCOME	NG	Bra	nch (Code		Cou Coc		CO Cod		LO Code	Format No. 4	
	JRSE	Manufacturing Pr	ocesses					0	2	3	0) 1	5		4		
	ME																
	cription	Make use of metal		-	given job.												
LO Des	cription	Follow safety preca	autions in	n welding shop.													
					SCHEME O	PF STUD	Y										
S. No.	Lear	ning Content		ing –Learning Method	Description Proce			'each Hrs.	ľ	ract. Fut Irs.		LR	s Requ	ired		Remarks	
1	Safety precaution in welding shop.		hands on practice.			the lab The learn ice.			05	05		Handouts, chalk board, charts, video film.			D		
				S	CHEME OF A			•									
S. No.	Metho	od of Assessment	D	escription of As	sessment	Maxiı Maı				Res	ourc	es Re	quired			External / Internal	
1	1 Laboratory test by pi			Student will be observed for safety practices while making a given welding job.			10 Ot		Observation schedule/ check-list / ra scale / rubrics				ating	Internal			
			ADDIT	IONAL INSTR	UCTIONS FO	R THE I	IOD/	FAC	ULTY	(IF .	ANY	')					
					Part of la	b work											

Practical List

S.No.	NAME OF EXPERIMENT	SHOP	PRACT. Hrs.	
1	Making a split/solid pattern from wood	Carpentry /pattern shop	04	II CO 15Hrs
2	Practice of green and dry sand making, tempering of sand,	Foundry shop	03	
3	Practice of core making and baking	Foundry shop	04	_
4	Practice of open mould using split pattern/solid pattern.	Foundry shop	04	
5	Demonstration of Metal rolling, metal drawing	Virtual lab/ Industry Visit	03	III CO 06 Hrs
6	Demonstration of metal extrusion, metal forging	Virtual lab/ Industry Visit	03	
7	Demonstration of dies, punches, simple working press unit and double action press.	Machine shop/ Industry/ Virtual lab	03	IV CO 06 Hrs
8	Demonstration of press working operations	Machine shop/ Industry visit/ Virtual lab	03	
9	Practice of edge preparation for welding.	Welding shop	03	V CO 18 Hrs
10	Demonstration and practice of bead laying (Welding) on a Flat pieces	Welding Shop	03	
11	Prepare corner, edge and Tee joints using arc welding	Welding Shop	06	
12	Demonstration of joining wires and rods of different size on spot welding machine.	Welding Shop/ Virtual lab	03	
13	Prepare a simple job using gas welding.	Welding Shop	03	