RGPV (I	DIPLO BHO		ING)		CULUM FOR THE OURSE	FORMA	Т-3	Sheet No. 1/3			
Branch			Ce	ment Technology		Semester		IV			
Course Co	ode	40	1	Course Name	STRENGTI	H OF MATE	ERIALS				
Course Ou	itcome	e 1	Calcul	ate stresses, strain a	and strain energy.		Teach Hrs	Marks			
Learning C	Dutcor	me 1	Draw	stress strain diagrar	n for a given material.		04	05			
Contents			Simple stresses and strains viz. tensile, compressive, Shear, Thermal, fatigue stresses and strains, Hook's Law, Stress-S ductile material and brittle material.								
Method of	Asse	ssment	Paper	pen test							
Learning Outcome 2Calculate stresses, strains, elastic constants, principal stresses and strains for a given condition.							06	10			
Contents			Modul consta	lus, Shear Modulus nts-–Problems on I	Constants, Lateral Strai , Volumetric Strain. Re Direct Stresses and Lin al stresses and strains. I	elation betwe ear Strains, I	een elas Hook's	tic			
Method of	Asse	ssment		y exam							
Learning C	Dutcor	me 3	Calcul object	0.	nder given loading for	a given	06	05			
Contents			resilier i) Grad	nce; formulae of str	ergy or resilience, pro ain energy for the follo ii) Suddenly applied h d on strain energy.	owing cases:					
Method of	Asse	ssment		pen test							
Course Ou	itcom	e 2	Perfor	m mechanical testi	ng of materials.						
Learning C	Dutcor	me 1		be an appropriate to ty of a given mater	est method for a mecha ial.	anical	09	20			
Contents			hardne limit, Destru hardne Non- o radiog	ess, malleability, p active testing , tens ess test, torsion test, destructive testing r raphy testing, elect	lasticity, strength, stit sile test, compression , impact test fatigue tes nethods, visual testing,	l testing, ultrasonic testing, sting, magnetic particle testing,					
Method of	Asse	ssment	ucoust		aboratory test by obser	-	5 meth				

Learning Outcome 2	Perform a given destructive/ non-destructive test for a given material.	36	30	
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Contents	Destructive testing , tensile test, compression test, shear hardness test, torsion test, impact test fatigue test, Non- destructive testing methods, visual testing, ultrasonic t radiography testing, electromagnetic testing, magnetic partic acoustic emission testing, liquid penetrate testing, leak testing	esting, cle testing	5,
Method of Assessment	Laboratory test by observation		
Course Outcome 3	Draw SFD and BMD for a given beam under loading.	Teach Hrs	Marks
Learning Outcome 1	Describe types of load, shear force, bending moment acting on beams.	04	05
Contents	Definition-Shear Force and Bending Moment, types of beam simply supported, overhanging and fixed beams, types of log beams- point load, uniformly distributed load, uniformly van	ad acting	on
Method of Assessment	Theory exam		
Learning Outcome 2	Draw shear force, bending moment diagram for a beam under a given loading condition.	10	15
Contents	Bending Moment and its importance -sign convention to dra diagram and bending moment diagram- Concept of Maximu moment, Point of Contra-flexure and its importance-Drawin bending moment diagram for Cantilever, Simply Supported to Point Load and U.D.L	ım bendir ıg shear f	ng orce and
Method of Assessment	Theory exam		
Course Outcome 4	Calculate bending stresses for a given beam.	Teach Hrs	Marks
Learning Outcome 1	Explain bending stresses, modulus of section and bending equation.	04	06
Contents	Position of neutral axis in beams, moment of resistance, Ber (without proof), Modulus of section for rectangular, hollow circular and hollow circular sections, Beams of uniform stre	rectangu	
Method of Assessment	Theory exam	-	
Learning Outcome 2	Express relation between bending stress and radius of curvature.	04	05
Contents	Introduction, assumptions in theory of simple bending, bend between bending stress and radius of curvature (formula onl	•	s, relation
Method of Assessment	Assignment		
Learning Outcome 3	Calculate slope, deflection, flexural strength of a given beam.	08	10

Calculation of slope, deflection, flexural strength of cant	ilever a	nd simply
supported beams for point load and UDL.		
Paper pen test		
Calculate stresses using bending equation on a given beam.	08	14
constants. Principal stresses and strains. Mohr's Circle, Prob		
Theory exam		
Calculate design parameters of circular shafts and springs	Teach Hrs	Marks
Calculate design parameters of a given shaft.	08	10
shafts; Assumptions in simple torsion; Derivation $G_{T/J=f_s/R=G\theta/L}$;	of the	equation
Theory exam		
Explain springs, its classification and stiffness of a spring.	05	05
1 0	1 0	; stiffness
Quiz		
Calculate design parameters of a given spring.	08	10
Theory exam		
	supported beams for point load and UDL. Paper pen test Calculate stresses using bending equation on a given beam. Factor of Safety, Elastic Constants, Lateral Strain, Poisson's Modulus, Shear Modulus, Volumetric Strain. Relation betwee constantsProblems on Direct Stresses and Linear Strains, F constants. Principal stresses and strains. Mohr's Circle, Prob equation Theory exam Calculate design parameters of circular shafts and springs Calculate design parameters of a given shaft. Definition and function of shaft: Calculation of polar M.I. fo shafts; Assumptions in simple torsion; Derivation of Theory exam Explain springs, its classification and stiffness of a spring. Classification of springs: Nomenclature of closed coil helica Deflection formula for closed coil helical spring (without der of spring. Quiz Calculate design parameters of a given spring. Numerical Problems related to comparison of strength and w hollow shafts. Numerical problems on closed coil helical spring load, deflection, size of coil and number of coils.	Paper pen test 08 Factor of Safety, Elastic Constants, Lateral Strain, Poisson's ratio, Bu Modulus, Shear Modulus, Volumetric Strain. Relation between elastic constants.—Problems on Direct Stresses and Linear Strains, Hook's L constants.—Problems on Direct Stresses and Linear Strains, Hook's L constants. Hook's L constants. Principal stresses and strains. Mohr's Circle, Problems on equation Theory exam Calculate design parameters of circular shafts and springs Teach Hrs Calculate design parameters of a given shaft. 08 Definition and function of shaft: Calculation of polar M.I. for solid ar shafts; Assumptions in simple torsion; Derivation of the T/J=fs/R=Gθ/L; Numerical Problems on design of shaft based on strength and rigidity Theory exam Explain springs, its classification and stiffness of a spring. 05 Classification of springs: Nomenclature of closed coil helical spring; Deflection formula for closed coil helical spring; (without derivation) of spring. 08 Numerical Problems related to comparison of strength and weight of hollow shafts. Numerical problems on closed coil helical spring to fin load, deflection, size of coil and number of coils. 08

RG	RGPV (Diploma Wing) Bhopal		1		R LEARNING	Br	anch C	ode	Co	urse C	ode	CO Code	LO Code	Format No. 4
10		ing (fing) znopu	-	OUTC	COME	С	0	1	4	0	1	1	1	
COURS	SE NAME	STRENGTH OF N	MATEF	RIALS					.1		1		1	1
CO Des	cription	Calculate stresses,	, strain a	and strain energy.										
LO Des	cription	Draw stress strain	diagrar	n for a given mate	rial.									
		1			SCHEME O	F STU	DY							
S. No.			Tea	ching –Learning Method	Description of Process	T-L	Teach Hrs.		ct. /Tut Hrs.	I	LRs Re	quired		Remarks
1	Simple stresses and strains viz. tensile, compressive, Shear, Crushing, Thermal, fatigue stresses and strains, Hook's Law, Stress- Strain curve for ductile material and brittle material.		teachi demo	nstration, quiz, ments,	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.		4]	NIL	PPT,	,	halk board	<i>,</i>	
					SCHEME OF A	SSESS	MENT							
S. No.	Metho	od of Assessment		Description of A	Assessment		kimum larks			Resour	ces Re	quired		External / Internal
1	P	aper pen test		dent will be asked in diagram for a g			05		Test paper + Rating scale			Internal		
	<u> </u>		ADI	DITIONAL INSTE	RUCTIONS FOR	THE H	OD/ FA	CULT	Y (IF A	NY)				<u> </u>
					Part of prog	gressive	e I							
1						THE H	OD/ FA	CULT	Y (IF A	NY)				

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
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					С	0	1 4	0	1	1		2	
COURS	E NAME	STRENGTH OF N	IATERIALS										
CO Dese	cription	Calculate stresses,	strain and strain energy.										
LO Desc	cription	Calculate stresses,	strains, elastic constants,	principal stresses	and st	rains for	a given cond	ition.					
				SCHEME O	F STU	DY							
S. No.	Lear	ming Content	Teaching –Learning Method	Description of Process	T-L	Teach Hrs.	Pract. /Tu Hrs.	t	LRs Re	quired			Remarks
1	Constants Poisson's Modulus, Volumetr between e Problems Stresses a Hook's L constants	Safety, Elastic s, Lateral Strain, ratio, Bulk Shear Modulus, ic Strain. Relation elastic constants on Direct and Linear Strains, aw elastic . Principal stresses is. Mohr's Circle.	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Process Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.		6	NIL	PPT	Handouts, chalk board, PPT, text book, charts, video film.				
			S	SCHEME OF A	SSESS	SMENT							
S. No.	Metho	od of Assessment	Description of A	ssessment		ximum Iarks		Resou	rces Re	quired			External / Internal
1 Theory exam		heory exam	Student will be asked to calculate given properties for a given condition.			10	Question paper		aper + r	ating so	cale		External
			ADDITIONAL INSTR	UCTIONS FOR 7	ГНЕ Н	IOD/ FA	CULTY (IF	ANY)					
				NII	<u>,</u>								

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
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					С	0	1	4	0	1	1	3	
COURS	E NAME	STRENGTH OF M	IATERIALS										
CO Des	cription	Calculate stresses,	strain and strain energy.										
LO Dese	cription	Calculate strain ene	ergy under given loading	for a given objec	t.								
				SCHEME O	F STU	DY							
S. No.	Description of Process	T-L	Teach Hrs.		ct. /Tut Hrs.]	LRs Red	quired		Remarks			
1	energy or resilience resilience strain e following i) Gradua ii) Sudde iii) Imp	cases: ally applied load, nly applied load, pact/shock load; problems based	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	m Teacher will explain the contents and		6	1	NIL	Handouts, chalk board, PPT, text book, charts, video film.		· · ·		
				SCHEME OF A	SSESS	MENT			1				
S. No.	Metho	od of Assessment	Description of A	ssessment		kimum larks			Resou	ces Rec	luired		External / Internal
1 strain				Student will be asked to calculate strain energy under given loading for a given object.		05		Test paper + Rating scale				Internal	
	1		ADDITIONAL INSTR	RUCTIONS FOR	THE H	OD/ FA	CULT	Y (IF A	NY)				
				Part of prog	gressive	e I							

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4	
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						C	0	1	4	0	1	2	1		
COURS	E NAME	STRENGTH OF M	ATERIALS												
CO Dese	cription	Perform mechanica	l testing of mater	ials.											
LO Desc	cription	Describe an approp	Describe an appropriate test method for a mechanical property of a given material.												
		I		SCH	IEME OF	STUD	ŊУ								
S. No.		Learning Conte	ent	Teaching – Learning Method	Descrip Pr	otion of cocess	T-L	Teach I	Hrs.	Pract. 's. /Tut LRs Required Hrs.		uired	Remarks		
1	creep, du malleabil toughness Destructi test, shea torsion te destructiv ultrasonic electroma testing, au	cal properties of mate ctility, elasticity, har ity, plasticity, streng s, endurance limit, ve testing , tensile test r test bending test, ha st, impact test fatigue ve testing methods, v c testing, radiography agnetic testing, magn coustic emission test testing, leak testing	Interactive classroom teaching, demonstratio n, quiz, assignments, tutorial	Teacher y the conte provide h students. will cond assignme quiz/tuto students their kno	d its to er make se	NIL		09 Handouts, chalk board, PPT, text book, charts, video film, lab manual.							
	·			SCHEM	IE OF ASS	SESSN	AENT						· · ·		
S. No.	Metho	od of Assessment	Descripti	on of Assessme	nt	Maxi Ma	mum arks			Resourc	es Req	uired		External / Internal	
1	Laboratory test by observationStudent will be asked to select an appropriate test method for a mechanical property of a given materials.20Observation schedule/check-list /rating scales /rubrics					Internal									
			ADDITIONAL	INSTRUCTION	NS FOR TI	HE HC	DD/ FA	CULTY	(IF A	NY)					
				Р	art of Lab	Work									

COURS	E NAME	STRENGTH OF MA										
	cription	Perform mechanical										
	-					1						
LO Des	cription	Perform a given dest	tructive/ non-destructiv									
				SCHEME C)F STU	DY						
S. No.	I	Learning Content	Teaching – Learning Method	Description of Process	f T-L	Teach Hrs.	Pract. /Tut Hrs.		LRs I	Required	l	Remarks
1	compress bending to torsion te test, Non- methods, testing, ra electroma particle te testing, lie	ve testing , tensile test ion test, shear test est, hardness test, st, impact test fatigue - destructive testing visual testing, ultraso adiography testing, agnetic testing, magne esting, acoustic emissi quid testing, leak testing	classroom teaching, demonstration, quiz, assignments, tutorial	-		NIL	36	PPT,	text bo	nalk boa ok, char ab manu	ts,	
	1			SCHEME OF A	SSESS	MENT						1
S. No. Method of Assessment Description of Assessment						kimum larks		Resour	rces Red	quired		External / Internal
				tudent will be asked to perform a estructive test for a given material.			30 Observat		tion schedule/check-list /rating scales /rubrics			External
	1		ADDITIONAL INST	RUCTIONS FOR	THE H	OD/ FAC	CULTY (IF A	ANY)				1
				Part of end pr								

					C	0 1	4	0	1	3	1	
		STRENGTH OF M										
CO Des	cription	Draw SFD and BM	ID for a given beam und	er loading.								
LO Dese	cription	Describe types of l	oad, shear force, bending	g moment acting o	n beam	ns.						
				SCHEME O	F STU	DY						
S. No.	Lear	ming Content	Teaching –Learning Method	Description of Process	T-L	Teach Hrs.	Pract. /Tut Hrs.]	LRs Red	quired		Remarks
1	Bending I beams can supported fixed beat acting on load, unif	n-Shear Force and Moment, types of ntilever, simply l, overhanging and ms, types of load beams- point formly distributed formly varying	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will exp the contents and provide handout students. Teache conduct assignm quiz/tutorial to r students practice knowledge.	ts to er will nents/ nake	4	NIL	PPT,	,	nalk board ok, charts	,	
	1			SCHEME OF A	SSESS	MENT		1				
S. No.	Metho	od of Assessment	Description of A	Assessment		ximum Iarks		Resou	ces Rec	quired		External / Internal
1Student will be asked to d shear force, bending mon of load acting on a given				noment, types		5	Que	stion pa	aper + ra	ating scal	e	External
	1		ADDITIONAL INSTR	RUCTIONS FOR	THE H	OD/ FAC	CULTY (IF A	NY)				1
				NII								

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING	Br	anch C	ode	Сот	urse Co	ode	CO Code	LO Code	Format No. 4
	OUTCOME	С	0	1	4	0	1	3	2	

	anintian	Duory CED and DMD	for airon hears and - 1	adina					
	cription		for given beam under lo						
LO Dese	cription	Draw shear force, ber	nding moment diagram				condition.		
				SCHEME O	F STU	DY			
S. No.	Le	arning Content	Teaching –Learning Method	Description of Process	f T-L	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	importance draw sheat bending Concept of moment, flexure a Drawing bending r Cantileve Supported	Moment and its ce -sign convention to ar force diagram and moment diagram- of Maximum bending Point of Contra- and its importance- shear force and noment diagram for r, Simply d Beams subjected to ad and U.D.L	MethodProcessInteractiveTeacher will exclassroomthe contents andteaching,provide handoudemonstration,students. Teachquiz,assignments,assignments,quiz/tutorial totutorialstudents practic		d its to ier make ce	10	NIL	Handouts, chalk board, PPT, text book, charts, video film.	
			S	CHEME OF A	SSESS	MENT	1		
S. No.	Metho	od of Assessment	Description of As	ssessment		imum arks		Resources Required	External / Internal
1	Г	Theory exam	Student will be asked d force, bending moment beam under a given loa	diagram for a]	15	Ques	tion paper + rating scale	External
	1		ADDITIONAL INSTRU	JCTIONS FOR	THE HO	DD/ FAC	ULTY (IF A	NY)	I
				NII					

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
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					C	0	1	4	0	1	4		1	
COURS	E NAME	STRENGTH OF M	IATERIALS											
CO Desc	cription	Calculate bending s	stresses for a given beam.											
LO Desc	cription	Explain bending str	esses, modulus of section	n and bending equ	ation.									
	1			SCHEME O	F STU	DY								
S. No.	Lear	ming Content	Teaching –Learning Method	Description of T	'-L Pro	cess T	each Hr	s. Pr	act. /Tut Hrs.	L	Rs Red	quirea	đ	Remarks
1	beams, resistance equation Modulus rectangula hollow	(without proof), of section for	neutral axis in nomentInteractive classroom teaching, demonstration, quiz, assignments, tutorialTeacher will e contents and p handouts to st Teacher will c assignments/ d make students knowledge.neutral axis in bending ithout proof), section for hollowInteractive classroom teaching, assignments, tutorialTeacher will e contents and p handouts to st Teacher will c assignments/ d make students knowledge.						NIL	boar	douts, (rd, PPT k, chart	', text		
				SCHEME OF AS	SSESS	MENI	Г							
S. No.	Metho	od of Assessment	Description of A	ssessment		kimum arks			Resour	ces Re	quired			External / Internal
1Student will be asked describe bending stresses, modulus of section for given sections and bending equation.				ection for given		6		Т	est paper	r + Rat	ing sca	le		External
			ADDITIONAL INSTR	UCTIONS FOR 7	THE H	OD/ FA	ACULTY	(IF A	ANY)					
				NIL	1									

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING	Br	anch C	code	Co	urse Co	ode	CO Code	LO Code	Format No. 4	
	OUTCOME	С	0	1	4	0	1	4	2		

CO Deso	cription	Calculate bending	stresses for a given beam	1.					
O Desc	cription	Express relation b	etween bending stress and	l radius of curvatu	ıre.				
				SCHEME O	F STU	DY			
S. No.	Lear	rning Content	Teaching –Learning Method	Description of Process	T-L	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	in theory bending, relation b stress and	ion, assumptions of simple bending stress, retween bending l radius of (formula only).	Interactive classroom teaching, demonstration, quiz, assignments, tutorialTeacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.			04	NIL	Handouts, chalk board, PPT, text book, charts, video film.	
	1			SCHEME OF A	SSESS	MENT	1	II	
S. No.	Metho	od of Assessment	Description of A	Assessment		imum arks		Resources Required	External / Internal
1		Assignment	Student will be asked simple bending to exp between bending stres curvature.	press relation	()5	I	Rubrics/rating scales	Internal
			ADDITIONAL INSTR	RUCTIONS FOR	THE H	OD/ FAC	CULTY (IF A	NY)	· · · · · · · · · · · · · · · · · · ·
				Term v	work				

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Br	anch C	ode	Cou	ırse Co	ode	CO Code	LO Code	Format No. 4
		С	0	1	4	0	1	4	3	
COURSE NAME STRENGTH OF MATERIALS										

CO Des	cription	Calculate bending	stresses for a given beam	l.					
LO Des	cription	Calculate slope, de	eflection,flexural strength	of a given beam.					
				SCHEME O	F STU	DY			
S. No.	Lear	rning Content	Teaching –Learning Method	Description of Process	T-L	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	deflectior of cantile	on of slope, n,flexural strength ver and simply l beams for point UDL.	Interactive classroom teaching, demonstration, quiz, assignments, tutorialTeacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.				NIL	Handouts, chalk board, PPT, text book, charts, video film.	
	1		1	SCHEME OF AS	SSESS	MENT		I	
S. No.	Metho	od of Assessment	Description of A	Assessment		imum arks]	Resources Required	External / Internal
1	P	aper pen test	Student will be asked t deflection,flexural str beam under given load	ength of a given		10	Tes	st paper + Rating scale	Internal
	1		ADDITIONAL INSTR	RUCTIONS FOR	ГНЕ Н	OD/ FAC	CULTY (IF A	NY)	1
				Part of prog	ressive	II			

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code			urse Co	ode	CO Code	LO Code	Format No. 4
		OUTCOME	C	0	1	4	0	1	4 4		
COURSE NAME	STRENGTH OF MATE	RIALS			-			<u>.</u>			

CO Des	cription	Calculate bending stres	ses for a given beam.						
LO Des	cription	Calculate stresses using	bending equation on a	given beam.					
				SCHEME O	F STUDY				
S. No.		Learning Content	Teaching – Learning Method	Description Proce		Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Constant Poisson' Modulus Volumet between Problem Stresses Law elas stresses	f Safety, Elastic ts, Lateral Strain, 's ratio, Bulk s, Shear Modulus, tric Strain. Relation elastic constants s on Direct and Linear Strains, Hook stic constants. Principal and strains. Mohr's Circle s on bending		Teacher will the contents provide hand students. Tea conduct assig quiz/tutorial students prac knowledge.	and outs to ocher will gnments/ to make	08	NIL	Handouts, chalk board, PPT, text book, charts, video film.	
	1		SC	HEME OF A	SSESSMEN	лт		1	
S. No.	Meth	od of Assessment	Description of Asse	ssment	Maximur Marks	n	Resour	ces Required	External / Internal
1	1 stresses using bending		Student will be asked to tresses using bending ec given beam.	quation on a	14		Test paper	r + Rating scale	External
		AI	DDITIONAL INSTRUC	TIONS FOR	THE HOD/	FACULTY	Y (IF ANY)		
				NII					

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4	
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COURS	E NAME	STRENGTH OF I	MATERIALS					
CO Des	cription	Calculate design p	parameters of circular shaf	ts and springs				
LO Des	cription	Calculate design p	parameters of a given shaf	t.				
				SCHEME OF STU	JDY			
S. No. Learning Content			Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Definition and function of shaft: Calculation of polar M.I. for solid and hollow shafts; Assumptions in simple torsion; Derivation of the equation $T/J=f_s/R=G\theta/L$; Numerical Problems on design of shaft based on strength and rigidity		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.	8	0	Handouts, chalk board, PPT, text book, charts, video film.	
				SCHEME OF ASSES	SMENT			
S. No.	Methoo	Method of Assessment De		aggement	Maximum Marks		Resources Required	External / Internal
1	Tł	neory exam	Student will be asked design parameters a g		10	Te	st paper + Rating scale	External
			ADDITIONAL INSTR	UCTIONS FOR THE I	IOD/ FAC	CULTY (IF A	NY)	
				NIL				

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
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					С	0	1 4	0	1	5	2			
COURS	E NAME	STRENGTH OF N	MATERIALS											
CO Des	cription	Calculate design p	parameters of circular shaf	ts and springs										
LO Dese	cription	Explain springs, it	ts classification and stiffne	ess of a spring.										
				SCHEME O	F STU	DY								
S. No. Learning Content Teaching –Learning Description Method Proce					T-L	Teach Hrs.	Pract. /Tut Hrs.	I	LRs Red	quired		Remarks		
1	Nomencla coil he Deflection closed co (without	Deflection formula for closed coil helical spring assignments, tutorial. students. Teach conduct assignments		s to er will nents/ nake	5	NIL	PPT,		nalk boa ok, char	· · ·				
				SCHEME OF A	SSESS	MENT								
S. No.	Metho	d of Assessment Description of Assessment		Maximum Marks			Resources Required				External / Internal			
1		Quiz Student will be asked to expla springs, its classification and of a spring.		-	05			Rubrics/rating scales				Internal		
	1		ADDITIONAL INSTR	RUCTIONS FOR	THE H	OD/ FA	CULTY (IF A	ANY)						
				Term v	vork									

RGPV (Diploma Wing) Bhopal			SCHEME FOR LEARNING		Branch Code		le Course Code		CO Code	LO Code	Format No. 4	
Ro		ina ((ing) biopai	OUTO	OUTCOME		0	1 4	0	0 1 5		3	
COURS	E NAME	STRENGTH OF M	IATERIALS			11	I		1		1	
CO Des	cription	Calculate design pa	arameters of circular sha	fts and springs								
LO Dese	cription	Calculate design pa	arameters of a given spri	ng.								
				SCHEME O	F STU	DY						
S. No.	Lear	rning Content	Teaching –Learning Method	Description of T-L Process		Teach Hrs.	Pract. /Tut Hrs.	LRs Required		quired		Remarks
1	strength a and h Numerica closed co find safe	o comparison of and weight of solid hollow shafts.	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.	s to er will nents/ nake	8	0	Handouts, chalk board, PPT, text book, charts, video film.		·		
				SCHEME OF A	SSESS	MENT						
S. No.	Metho	od of Assessment	Description of A	Description of Assessment		kimum larks	Resources Required				External / Internal	
1	Т	heory exam	Student will be asked design parameters a g			10	Te	est paper + Rating scale				External
	1		ADDITIONAL INST	RUCTIONS FOR	THE H	OD/ FAC	CULTY (IF A	ANY)				1
				NII	<u>_</u>							