RGPV (DIPLOMA WING)
BHOPAL

OBE CURRICULUM FOR THE COURSE

FORMAT-3

Sheet No. 1/5

	BHOP			THE	COURSE			NO. 1	., 3
Branch			Automo	obile Engine	ering	Semester	F	ourth	
Course Co	ode	404	C	ourse Name	Basics of	Mechanical	Engineeri	ng-II	
Course (Outcor	me 1	Student	will be able	e to calculate values	of various p	arameters	T-L	Marks
			related	to flow of wa	nter in a pipeline			Hrs	
			Student	will be able	to calculate the value	of water pro	essure in a		
Learning	Outco	me 1	given p	roblem, at a	any cross-sectional a	rea of the p	oipe using	08	05
			continu	ity equation					
			Importa	nt Properties	of liquid- Viscosity, d	ensity, , spec	ific gravity,	variou	ıs types
Cor	ntents		of press	ure – atmosp	oheric pressure, gauge	pressure, al	osolute pres	ssure, v	vacuum
			pressure	e, flow of v	water in a pipe, co	ntinuity equ	ation, simp	ole nu	merical
			problem	ns based on li	quid pressure /continu	uity equation			
Method of	f Asses	sment	Theory	exam					
			Student	will be able	to calculate the wat	er pressure	in a given		
Learning	g Outco	me 2	problen	n, at a cross s	section of the pipe th	rough use of	simple U-	08	10
			tube me	ercury manor	neter				
			Need of	pressure me	easurement for water	flowing in a	pipeline, pr	essure	at any
				•	easurement for water	_			•
Cor	ntents		section	of pipe in ter		column, var	ious metho	ds of p	ressure
Cor	ntents		section measure	of pipe in ter ement, mand	ms of height of water	column, var	ious metho	ds of p	ressure king of
Cor	ntents		section measure simple U	of pipe in ter ement, mand	ms of height of water ometer and its types, ry manometer, proced	column, var	ious metho	ds of p	ressure king of
Cor Method o		ssment	section measure simple U	of pipe in terement, mand J tube mercu	ms of height of water ometer and its types, ry manometer, proced	column, var	ious metho	ds of p	ressure king of
		ssment	section measure simple U U tube r	of pipe in terement, mand J tube mercu mercury mand	ms of height of water ometer and its types, ry manometer, proced	column, var theory cons dure for calcu	ious method struction ar ulating the p	ds of p	ressure king of
Method o	f Asses		section measure simple U U tube r Theory Student	of pipe in terement, mand J tube mercu mercury mand exam	ms of height of water ometer and its types, ry manometer, proced ometer	theory considure for calcu	ious method struction ar ulating the p	ds of p nd wor pressur	ressure king of re using
	f Asses		section measure simple t U tube r Theory Student flowing	of pipe in terement, mand J tube mercu mercury mand exam will be able water in a given	ms of height of water ometer and its types, ry manometer, procedometer	column, var theory considure for calcular arameters re	ious method struction ar ulating the p elated to ped with	ds of p	ressure king of
Method o	f Asses		section measure simple t U tube r Theory Student flowing	of pipe in terement, mand J tube mercumercury mand exam will be able water in a give-meter or Ori	ms of height of water ometer and its types, ry manometer, processometer to calculate various payers simple problem of	column, var theory considure for calcular arameters re	ious method struction ar ulating the p elated to ped with	ds of p nd wor pressur	ressure king of re using
Method o	f Asses		section measure simple U U tube r Theory Student flowing Venturi equatio	of pipe in terement, mand I tube mercumercury mand exam will be able water in a given	ms of height of water ometer and its types, ry manometer, processometer to calculate various payers simple problem of	theory considure for calcular	ious method struction ar ulating the p elated to ped with noulli's	ds of p nd wor pressur	ressure king of re using
Method o	f Asses		section measure simple U U tube r Theory Student flowing Venturi- equatio Bernoul	of pipe in terement, mand J tube mercu mercury mand exam will be able water in a give-meter or Ori n	ms of height of water ometer and its types, ry manometer, processometer to calculate various payers simple problem of fice-meter or Pitot tu	theory considered for calcular arameters refine equipped be using Berries types of the construction of the	ious methodistruction ar ulating the pelated to ped with moulli's	ds of p nd wor pressur 10	ressure king of re using 10
Method of	f Asses	ome 3	section measure simple U U tube r Theory Student flowing Venturi equatio Bernoul	of pipe in terement, mand J tube mercury mand exam water in a give-meter or Ori n li's theorem,	ms of height of water ometer and its types, ry manometer, processometer to calculate various powen simple problem of fice-meter or Pitot tuits application, vario	theory considered for calcular arameters refine equipped to be using Bernard types of centuri-meter	ious methodistruction argulating the pulating the pulated to ped with moulli's	10 ds of p	ressure king of re using 10 rnoulli's
Method of	of Asses	ome 3	section measure simple U U tube r Theory Student flowing Venturi equatio Bernoul equatio tube, us	of pipe in terement, mand J tube mercury mand exam water in a give-meter or Ori n li's theorem, n, constructionse of Bernoul	ms of height of water ometer and its types, ry manometer, processometer to calculate various powen simple problem of fice-meter or Pitot tue its application, various and working of Ventage of Vent	theory considered for calculating various	ious methodistruction argulating the pulating the pulated to ped with moulli's energy head, Orifice-metus paramet	10 ds, Bereter areers rel	ressure king of re using 10 rnoulli's and Pitot
Method of	of Asses	ome 3	section measure simple U U tube r Theory Student flowing Venturi equatio Bernoul equatio tube, us flowing	of pipe in terement, mand J tube mercury mand exam water in a give-meter or Ori n li's theorem, n, constructionse of Bernoul	ms of height of water ometer and its types, ry manometer, processometer to calculate various parts application, various application, various and working of Volis's equation for calculate problem of the calculate problem	theory considered for calculating various	ious methodistruction argulating the pulating the pulated to ped with moulli's energy head, Orifice-metus paramet	10 ds, Bereter areers rel	ressure king of re using 10 rnoulli's and Pitot

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OBE CURRICULUM FOR THE COURSE

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Sheet No. 2/5

	вно	PAL		THE	COURSE	PORIV	IAI-	No. 2/5		
Branch			Auton	nobile Engine	ering	Semester	Fo	ourth		
Course	Code	404		Course Name	Basics of	Mechanical	Engineeri	ng-II		
Course	e Outco	ome 2	drawii	ngs related to	to select, draw and in threads, fasteners, we related various symbo	veld joints, p		T-L Hrs	Marks	
Learnir	ng Outo	come 1			e to select and draw fasteners in a given p			08	10	
C	ontent	s	Intern thread bolts	al – external th	nent fasteners, sketch nreads, Left hand – rig studs (cap screws, ma nal, square), sketche common keys	ght hand thruchine screws	eads, Single s, set screw	e & mu s), ske	ılti stari tches o	
Method	of Ass	essment	Theor	y exam	<u> </u>					
			Studo	ما النب			ald inima			
Learnir	ng Outo	come 2			e to draw and intern of the contraction of the cont	-	•	08	05	
	ng Outo		weld symbol design	symbols as pols), weld nom	n drawing related var er BIS-813 / ASME nenclature, weld dim , pipe line symbol as p	ious symbol (primary synensions, pi	s. mbols & s pe-types, s	uppler tandar	mentary rds and	
	ontent	s	piping Weld symbol design fitting	symbols as pools, weld nom	n drawing related var er BIS-813 / ASME nenclature, weld dim , pipe line symbol as p	ious symbol (primary synensions, pi	s. mbols & s pe-types, s	uppler tandar	mentary ds and	
C	ontent of Asse	essment	piping Weld symbol design fitting Theory Studen releva	symbols as pools, weld nome ation methods, symbols, pipe I by exam In the will be able and the symbols are of various.	n drawing related var er BIS-813 / ASME nenclature, weld dim , pipe line symbol as p	cious symbol (primary symensions, piper passing flood	mbols & s pe-types, s uid, air, gas,	uppler tandar	mentary rds and	
Method Learnin	ontent of Asse	essment	piping Weld symbol design fitting Theory Studen releva simple Meani limits,	symbols as pools, weld nome attion methods, symbols, pipe I y exam Int will be able ance of various production or ing and relevant fits, tolerance	n drawing related var er BIS-813 / ASME nenclature, weld dim , pipe line symbol as p ine diagram. to interpret and exp s symbols and value	cious symbol (primary symensions, piper passing fluoring the mees used in cons, dimensions, dimensions	mbols & s pe-types, s uid, air, gas, eaning and the given	uppler tandar , water 12	nentary rds and r, Piping	

RGPV	(DIPLOMA	WING)
	BHOPAL	

OBE CURRICULUM FOR THE COURSE

FORMAT-3

Sheet No. 3/5

ВН	OPAL	THE (COURSE	FORM	AT-J	o. 3/5	
Branch		Automobile Engineer	ing	Semester	For	urth	
Course Code	404	Course Name	Basics of	Mechanica	l Engineerin	g-II	
Course Out	tcome 3	Student will be able to productivity and qualit			enhance the	T-L Hrs.	Marks
Learning Ou	itcome 1	Student will be able problem, from given to				07	10
	_	study or work sampling	_				
Conte	nts	Time study, its importal watch time study and rating, calculation of seither stop watch methods use of formula only	work sampling, obse tandard time from g	rved and sta	andard times, elated data g	perfo	rmance
Method of As	ssessment	Theory exam					
Learning Ou	itcome 2	Student will be able to which fall within two given confidence level normal distribution cur	given specification I, using the standard	limits, con	sidering the	09	05
Conte	nts	Normal distribution cur levels, z-value, use of z applications in statistic of area under the curve	-value tables, calcula al quality control, sin	tion of area	under norma	al curve	e, othe
Method of As	ssessment	Theory exam					
Learning Ou	itcome 3	Student will be able to control limit, and low construct the charts for assessing quality of	ver control limit for or the given data, in	X bar & R	charts, and	09	10
Conte	nts	Quality control in mar process control, process values and their formul actual chart preparati productivity	ss control charts, the	ir types and	I use, UCL, LC	CL, Cen proced	tre-lind

RGPV (DIPLC BHO	MA WII	NG)		CULUM FOR OURSE	FORMAT-	3	Sheet No. 4/5
Branch			Auto	mobile Engineerin	g	Semester		Fourth
Course	Code	404		Course Name	Basics of	Mechanica	l En	gineering-II
Method	of Asse	essment	Theo	ry exam				

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OBE CURRICULUM FOR THE COURSE

FORMAT-3

Sheet No. 5/5

Br	HOPAL	THE	COURSE	TORIVIA	PORIVIATE NO					
Branch		Automobile Engine	ering	Semester	F	ourth	1			
Course Code	404	Course Name	Basics of I	Mechanical E	ngineerii	ng-II				
Course Outo	ome 4	Student will be ab working of basic vapo	<u>-</u>	-		T-L Hrs.	Marks			
Learning Ou	tcome 1	student will be able refrigeration and air of	-	asic concepts	used in	07	05			
Contents		Cooling, throttling propertial pressure, psyconthermal comfort, hum	hometric processes, _I	osychometric c	chart, hur	nidity,	human			
Method of A	Assessment	Paper pen test								
Learning Ou	tcome 2	Student will be able heat rejected in giv Reversed Carnot Cycl	ven simple numerica	al problem ba	-	11	10			
Contents		Reversed Carnot cycle Bell- Coleman cycle, refrigerating effect a numerical problems b	representation on I	P-h and T-s d	iagram,	calcula	ation of			
Method of A	Assessment	Theory exam								
Learning Ou	tcome 3	Student will be able basic vapor compress	<u>-</u>	-	rking of	08	10			
Contents		Theory, construction system, construction	_	•	npression	refri	geration			
Method of A	Assessment	Theory exam								

DCD\/	/ Diplo	ma Mi	og \ Phonol	SCHEME FOR	LEARNING	В	ranch Co	de	Co	urse Co	de	CO Code	LO Code	_	Λ
KGPV	(Dibio	illa vvii	ng) Bhopal	OUTCOME A 0 3		3	4	0	4	1	1	Form	at No. 4		
COURS	E NAME	Basics of	Mechanical Engi	neering-II											
CO Des	cription	Student	will be able to	calculate values of va	arious paramete	rs rela	ated t	o flo	w of	wate	r in a ¡	oipe	line		
LO Desc	cription		will be able to o	calculate the value o	f water pressure	in a g	given	prob	lem,	at an	y cros	s -se	ection	al are	a of the
				SCH	IEME OF STUDY										
S. No.		Learning (Content	Teaching –Learning Method	Description of	T-L Pı	rocess	3	Teach Hrs.		Pract. ot Hrs.		LRs Requi		Remark
1.	Viscosity gravity, v – atmos pressure vacuum a pipe, c numeric	y, density, various type pheric presente, absolute pressure, ontinuity easure /co	pes of pressure ssure, gauge pressure, flow of water in equation, simple as based on	Traditional Lecture method	Teacher will explored concepts and for to contents, dem methods of solvi problems. Stude practice to solve under guidance of Teacher will assemble and provide necessity.	mulas nonstra ng diff nts wil proble of the ess the	relate ate ferent II ems teach ir abil	er.	06		02	7	ook:- Mecha by R. Khur Or Its equiva	nics S. mi	NIL
	•			SCHEM	IE OF ASSESSMEN	Т				1					
S. No.		od of		Description of As	ssessment				Maxir Ma	-		sou equi	rces red		kternal /

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1.	Theory exam	Examiner will frame two questions. First will be theoretical question to assess the ability of student to explain given theoretical concepts in approx. in 08 min. Second will be a numerical question to assess the ability of student to calculate the unknown variable by using the relevant formula, which can be solved by the student in approx. 12 min	05	Framed questions	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

DC	DV (Diele	ma Wing) Bhopal	SCHEME FOR	LEARNING	В	Branch Co	ode	Cou	urca Cada		CO Code	LO Code	1
NG	iPV (Dipio	ilia wilig j bilopai	OUTCO	OME	Α	0	3	4	0	4	1	2 For	mat No. 4
col	URSE NAME	Basics of Mechanical Engi	ineering-II							·			
CO E	Description	Student will be able to	calculate values of va	arious paramete	rs rela	ated 1	to flo	w of v	vate	r in a p	oipel	line	
LO D	Description	Student will be able to of simple U-tube mercu		pressure in a giv	en pr	oble	m, at	a cro	ss se	ection	of th	ne pipe t	rough use
			SCH	IEME OF STUDY									
S. No.	L	earning Content	Teaching -Learning Method	Description of	T-L P	roces	s	Teach Hrs.		Pract. ut Hrs.	.	LRs Required	Remark
	•	essure measurement for ng in a pipeline, pressure		Teacher will expl concepts and for to contents, dem	mulas	relat						ook:- Fluid Mechanics by R. S.	

SCHEME OF ASSESSMENT

and provide necessary

remedial and tutorials

equivalent

for calculating the pressure using $\ensuremath{\mathsf{U}}$

tube mercury manometer

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1.	Theory exam	Examiner will frame two questions. First will be simple numerical question to assess the ability of student to convert water pressure in to height of water column or viceversa in approx. 06 min. Second will be a simple numerical question on U tube manometer to assess the ability of student to calculate the unknown variable by using the relevant formula, which can be solved by the student in approx. 12 min	10	Framed questions	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

D6D//D1.1	M N. D I	SCHEME FOR LEARNING		HEME FOR LEARNING Branch Code			Course Code			CO LO Code Code			
KGPV (DIPIC	oma Wing) Bhopal	OUTCO	OME	Α	0	3	4 0 4 1 3 Forma			at No. 4			
COURSE NAME Basics of Mechanical Engineering-II													
CO Description	Student will be able to	calculate values of va	arious parameters	rela	ted t	o flo	w of	wate	er in a	pipe	line		
LO Description	Student will be able to equipped with Venturi	•				_			_	sim	ple pr	oblem	of pipe
		SCH	EME OF STUDY										
S. No.	Learning Content	Teaching -Learning Method	Description of T	-L Pr	oces	s	Teacl Hrs.		Pract. Tut Hr		LRs Requir		Remarks

No.	Learning Content	Method	Description of T-L Process	Hrs.	/Tut Hrs.	Required	Remarks
1	Bernoulli's theorem, its application, various types of energy heads, Bernoulli's equation, construction and working of Venturi-meter, Orifice-meter and Pitot tube, use of Bernoulli's equation for calculating various parameters related to flowing water in a given simple problem of pipe equipped with Venturi-meter,	Traditional Lecture method	Teacher will explain different concepts and formulas related to contents, demonstrate methods of solving different problems. Students will practice to solve problems under guidance of the teacher. Teacher will assess their ability and provide necessary	07	03	Book:- Fluid Mechanics by R. S. Khurmi Or Its equivalent	NIL

SCHEME OF ASSESSMENT

Orifice-meterand Pitot tube.

remedial and tutorials

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1.	Theory exam	Examiner will frame one question, which will be a simple numerical question on Venturimeter / Orifice meter / Pitot tube to assess the ability of student to calculate the unknown variable by using the relevant formula, which can be solved by the student in approx. 15 min	10	Framed question	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

D 🗢 :	DV / D! l	and Mina \ Discussion	SCHEME FOR L	EARNING	Branch	Code	Co	urse Code	Coc	de Code	A
KGI	וסוקוט) אין	ma Wing) Bhopal	OUTCOI	ME	A (3	4	0 4	2	1 1 F	ormat No. 4
cou	IRSE NAME	Basics of Mechanical Engir	neering-I								
CO D	escription	Student will be able to spiping and production d	•	•	nd draw	ings ı	elated	to thre	ads,	fasteners,	weld joints
LO D	escription	Student will be able to situation	select and draw sket	ches of differe	nt types	of tl	nreads	and fa	stene	ers in a giv	en problen
			SCHE	ME OF STUDY							
S. No.	L	earning Content	Teaching –Learning Method	Description o	f T-L Pro	ess	Teach Hrs.	Pra /Tut		LRs Require	Remark
1	sketches of sknuckle, Intellect hand — multi start the (cap screws), skee (hexagonal, (snap, pan, o	& permanent fasteners, threads (square, acme, ernal – external threads, right hand threads, Single & hreads), sketches of studs machine screws, set tches of bolts & nut square), sketches of rivets countersunk, conical), common keys	Traditional Lecture method	Teacher will exconcepts and managements and managements are managements. Students will propose the solve problems guidance of the Teacher will assability and provenedial and to	ethods ents, ethods for t probler factice to under teachers sess their ide nece	or ns.	06	02	2	Book:- Machine Drawing by N. D. Bhat Or Its equivalen	INIL
			SCHEME	OF ASSESSMENT	•						
S. No.	Method of Assessmen		Description of Ass	Description of Assessment				Maxin Mar	_	Resources Required	
1.	Examiner will frame two questions, first will be to draw the given thread / nut stud in (to be solved in approx. 8 min.), second will be to sketch the given rivet (to be solved in approx. 7 min.)				-	-	10)	Framed question	External	

	(Diploma Wing) Bhonal SCHEME FOR LE		R LEARNING Branch Code		e	Course Code			LO Code	1
RGPV (Diploma Wing) Bhopal		OUTCOME		0	3	4	0 4	. 2	2	Format No. 4
COURSE N	AME Basics of Mechanical Eng	gineering-I								
	C4d.a4									
CO Descrip	piping and production	•	terpret sketches and c ious symbols	drawing	gs rela	ated	to thre	ads, f	astener	rs, weld joint
•	piping and production	drawing related var	ious symbols						astener	rs, weld joint
CO Descript	piping and production	drawing related var draw and interpret	ious symbols						astener	rs, weld joint

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Weld symbols as per BIS-813 / ASME (primary symbols & supplementary symbols), weld nomenclature, weld dimensions, pipe-types, standards and designation methods, pipe line symbol as per passing fluid, air, gas, water, Piping fitting symbols, pipe line diagram.	Traditional Lecture method	Teacher will explain different concepts and methods related to contents, demonstrate methods for solving different problems. Students will practice to solve problems under guidance of the teacher. Teacher will assess their ability and provide necessary remedial and tutorials	06	02	Book:- Machine Drawing by N. D. Bhatt Or Its equivalent	NIL

SCHEME OF ASSESSMENT

S.	Method of	Description of Assessment	Maximum	Resources	External /
No.	Assessment		Marks	Required	Internal
1	. Theory exam	Examiner will frame two questions, first will be to draw the given weld symbol, thread, second will be to sketch the given pipeline/ pipe fitting symbol, which can collectively be solved by the student in approx. 20 min	05	Framed question	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

SCHEME FOR LEARNING OUTCOME

В	Branch Code			urse Co	de	CO Code	LO Code
Α	0	3	4	0	4	2	3

Format No. **4**

COURSE NAME	Basics of Mechanical Engineering-II
CO Description	Student will be able to select, draw and interpret sketches and drawings related to threads, fasteners, weld joints, piping and production drawing related various symbols
LO Description	Student will be able to interpret and explain the meaning and relevance of various symbols and values used in the given simple production or assembly drawings

SCHEME OF STUDY

S. No	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Meaning and relevance of different sections, dimensions, symbols related to limits, fits, tolerances, machining and welding symbols, pipe related symbols, different drawing notes, tool list and gauge list.	Traditional Lecture method	Teacher will explain meaning and relevance of different sections, dimensions, symbols, drawing notes, and lists used in production and assembly drawings, students will practice to solve different problems under guidance of the teacher. Teacher will assess their ability and provide necessary remedial and tutorials	08	04	Book:- Machine Drawing by N. D. Bhatt Or Its equivalent	NIL

SCHEME OF ASSESSMENT

S.	Method of	Description of Assessment	Maximum	Resources	External /
No.	Assessment		Marks	Required	Internal
1	. Theory exam	Examiner will frame two questions, first will be about meaning and relevance of limits, fits, tolerances related given symbols and values in a given drawing, second will be about meaning and relevance of the machining/welding symbols in a given drawing, which can be collectively solved by the student in approx. 20 min	10	Framed question	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING
RGPV (Dipiolila Willg) Bilopal	OUTCOME

Branch Code			Cc	Course Code			LO Code
Α	0	3	4	0	4	3	1

Format No. **4**

COURSE NAME	Basics of Mechanical Engineering-II
CO Description	Student will be able to apply appropriate methods to enhance the productivity and quality in the industrial activities
LO Description	Student will be able to calculate standard time in the given problem, from given time data gathered through stop watch time study or work sampling

SCHEME OF STUDY

S. No	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Time study, its importance for productivity, uses of time study, procedures of stop watch time study and work sampling, observed and standard times, performance rating, calculation of standard time from given time related data gathered from either stop watch method or work sampling, simple numerical problems based on use of formula only	Traditional Lecture method	Teacher will explain the contents to students, demonstrate the procedures for calculating standard time, students will practice to solve different problems under guidance of the teacher. Teacher will assess their ability and provide necessary remedial and tutorials	05	02	Book:- Industrial Engg. by O. P. Khanna Or Its equivalent	NIL

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Theory exam	A numerical question will be framed, based either on stop watch time study or on work sampling, for calculating the unknown variable using the formula and given values of known variables, which can be solved by the student in approx. 15 min.	10	Framed question	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING Branch Code		le	Course Code			CO LO Code Code	<i>1</i>				
NG	טוקוט) אין	niia wiiig j biiopai	OUT	COME	Α	0	3	4	0	4	3	2	Format No. 4
cou	RSE NAME	Basics of Mechanical Engi	neering-II										
CO D	escription	Student will be able to ap	ply appropriate met	thods to enhance the	prod	uctivi	ty and	d qual	lity in	the in	dust	rial act	ivities
LO D	escription	Student will be able to ca the given confidence leve	•	_					-	-	icatio	on limi	ts, considerir
			S	CHEME OF STUDY									
S. No	L	Learning Content Teaching – Learning Method Description of T-L Process		-	Геасh Hrs.		ract. ut Hrs.	F	LRs Require	Remark			
Normal distribution curve, its important characteristics, six sigma limits, confidence levels, z-value, use of z-value tables, calculation of area under normal curve, other applications in statistical quality control, simple numerical problems on calculation of area under the curve using standard tables		Traditional Lecture method	Teacher will explain to students, demons procedures for findin under the curve, stupractice to solve diff problems under guic teacher. Teacher will ability and provide nemedial and tutoria	trate ng are dents erent dance I asse	the ea s will t of the ess the	e	06		03	Indentification of the second	P. nanna ·	NIL	
			SCHI	EME OF ASSESSMENT								-	'
S. Method of Description of Assessment							axim Mark			ources			

S.	Method of	Description of Assessment	Maximum	Resources	External /
No.	Assessment		Marks	Required	Internal
1	. Theory exam	A numerical question will be framed, for finding calculating the portion of population or area under the normal distribution curve after calculating z values or using given z-value and using normal curve area tables or given normal curve area values, which can be solved by the student in approx. 15 min.	05	Framed question	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING Branch Code					Course (Code	CO Code	LO Code	A	
		OUTC	OUTCOME A 0					4	3	3 Fo	ormat No. 4	
cou	RSE NAME	Basics of Mechanical Engi	neering-II				ı					
CO Description Student will be able to apply appropriate methods to enhance the productive activities									and o	ıuali	ty in th	e industria
LO D	escription	Student will be able to charts, and construct the process		· • •								
	'		SCI	HEME OF STUDY								
S. No	Le	arning Content	Teaching –Learning Method	Description of T	-L Process		Teac Hrs		Pract. /Tut Hrs		LRs Required	Remarks
1	assembling statistical procontrol charulch, LCL, Cetheir formul calculations actual chart	Teacher will explain the contents to students, demonstrate the procedures for preparation of X bar & R charts, ns of values, procedure for art preparation at the shop lysis of charts for a productivity Teacher will explain the contents to students, demonstrate the procedures for preparation of X bar & R charts, students will practice solve different problems under guidance of the teacher. Teacher will explain the contents to students, demonstrate the procedures for preparation of X bar & R charts, students will practice solve different problems under guidance of the teacher. Teacher will explain the contents to students, demonstrate the procedures for preparation of X bar & R charts, students will practice solve different problems under guidance of the teacher. Teacher will explain the contents to students, demonstrate the procedures for preparation of X bar & R charts, students will practice solve different problems under guidance of the teacher. Teacher will explain the contents to students, demonstrate the procedures for preparation of X bar & R charts, students will practice solve different problems under guidance of the teacher. Teacher will explain the contents to students, demonstrate the procedures for preparation of X bar & R charts, and guidance of the teacher. Teacher will explain the contents to students, demonstrate the procedures for preparation of X bar & R charts, and guidance of the teacher.					06		03	In er by O Kl O Its	. P. nanna r	NIL
			SCHEN	ME OF ASSESSMENT								
S. No.	Method of Assessmen	Description of Assessment						N	laximun Marks	- -	Resource Required	
1.	Theory exar	A question will be framed, in which student will be asked to calculate the values of centerline, UCL, LCL for X bar or R chart and plot the chart on the graph paper, which can be solved by the student in approx. 15 min							10		Framed question	External

RGPV (Diploma Wing) Bhopal

SCHEME FOR LEARNING OUTCOME

В	ranch Cod	le	Co	ourse Co	de	CO Code	LO Code
Α	0	3	4	0	4	4	1

Format No. 4

COURSE NAME	Basics of Mechanical Engineering-II
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CO Description | Student will be able to explain the theory, construction, working of basic vapor compression refrigeration system

LO Description student will be able to explain various basic concepts used in refrigeration and air conditioning

SCHEME OF STUDY

S. No	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Cooling, throttling process, coefficient of performance, humidity, Dalton's law of partial pressure, psychometric processes, psychometric chart, humidity, human thermal comfort, humidification, adiabatic saturation P-h and T-s diagrams	Traditional Lecture method	Teacher will explain the contents to students, students will practice to solve different problems under guidance of the teacher. Teacher will assess their ability and provide necessary remedial and tutorials	05	02	Book:- Refrigeration and Air Conditioning by C. P. Arora Or Its equivalent	NIL

SCHEME OF ASSESSMENT

S.	Method of	Description of Assessment	Maximum	Resources	External /
No.	Assessment		Marks	Required	Internal
1	. Paper pen test	A question will be framed to assess the ability of student to explain the given three basic concepts, which can be solved by the student in approx. 15 min	05	Framed question	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal		SCHEME	FOR LEARNING	SCHEME FOR LEARNING Branch Code				Course Code	Code Code				Л	
		oma wing) Bhopai	OUTCOME A 0 3				4	0	4	4 2 Forma			nat No. 4	
cou	RSE NAME	Basics of Mechanical Engin	eering-II						<u>'</u>					
CO D	escription	Student will be able to e	xplain the theo	ry, construction, work	ing o	f bas	ic vap	or c	ompre	ssi	on ref	rigera	tion s	system
LO D	escription	Student will be able to based on Reversed Carne			nd h	eat	reject	ed i	n give	n s	imple	nume	erical	problem
				SCHEME OF STUDY										
S. No	I	Learning Content	Teaching – Learning Method	Description of T-L P	roces	s	Teac Hrs.		Pract /Tut Hi		LRs	Requir	red	Remarks
1	on P-h and limitations, representa diagram, ca effect and l both the cy	Carnot cycle, representation and T-s diagrams, its as as, Bell- Coleman cycle, tation on P-h and T-s calculation of refrigerating diheat rejected and COP for cycles, simple numerical based on use of formula Teacher will explain the contents to students, , stude will practice to solve differe problems under guidance of the teacher. Teacher will as their ability and provide necessary remedial and tutorials		, students different ance of will assess de		07	07 04			Book:- Refrigeratio and Air Conditionin C. P. Arora Or Its equivale		g by	NIL	
	-		S	CHEME OF ASSESSMENT										'
S. No.	Method o		Description of Assessment					N	/laximu Marks			source equired		External / Internal
1.	Theory exa	am unknown variable whil	A numerical question will be set to assess the ability of student to calculate the unknown variable while using the formulae of COP, which can be solved by the student in approx. 15 min						10		1	ramed uestion		External
		ADI	DITIONAL INSTR	UCTIONS FOR THE HOD/	FACL	JLTY	(IF AN	Y)						

RGPV (Diploma Wing) Bh		Shanal	SCHEME FOR LEARNING Branch Code			de	Co	ourse Code		CO LO Code Code			1		
		onopai		OUTCOME	Α	0	3	4	0	4	4 4 3 Form			nat No. 4	
cou	RSE NAME	Basics of Mecha	anical Engineerir	ng-II											
CO D	escription	Student will be	e able to explai	in the t	heory, construction, work	ing o	f bas	ic vap	or c	ompre	ssio	n ref	rigerat	tion s	ystem
LO D	escription	Student will be	e able to explai	in the o	construction, working of b	asic v	apor	comp	oress	ion re	frige	eratio	n syst	tem.	
					SCHEME OF STUDY										
S. No	Learnin	ning Content Teaching -Learning Method Description of T-L Process Hrs.						Pract. Tut Hr		LRs	Requir	ed	Remark		
Theory, construction and working of basic vapor compression refrigeration system, construction and working of main components		basic vapor on on system, on and main	Traditional Led method	cture	Teacher will explain the co to students, , students will to solve different problems guidance of the teacher. To will assess their ability and necessary remedial and tur	pract s und eache prov	er er ide	05		03	F 6	and A Condi C. P. <i>A</i> Or	eratior ir tioning	g by	NIL
					SCHEME OF ASSESSMENT	•									
S. No.	Method o Assessmer		D	escripti	on of Assessment					laximu Marks		_	source quired		External / Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Framed

question

External

10

Two questions will be asked to assess the ability of student to explain theory

/construction/ working of the refrigeration system/ main components, which

can be solved by the student in approx. 15 min

1. Theory exam