1	Guru Nanak Dev Eng	ineering Colle			
	Department of I	ineering College, Ludhi Electrical Englneering	an-		
Program	B.Tech(CSE, IT) ESC-101		ana		
Subject Code	2	Subject Title	2nd		
MST No.	12	Course	BEE		1
		Coordinator(s)	Singh	Ranjit Singh, Baljeet Singh, Karanbir Singh, Sukhpal Singh, Balwinder Singh	
Max. Marks	24	Time Duration Roll Number	1 hour	30 minutes	
Date of MST	25 th , April 2024	Kon Hamber			1
Note: Attempt all question	Ouestio	n		CO	
Q. No.				COs, RBT level	Marks
What is the imp	ortance of earthing in ele	ectrical terminology?		CO2, L2	2
Find the primary	nding of 50Hz single pof flux is 0.06 Wb. The and secondary voltage.	secondary winding ha	s 20 turns.	CO5, L1	2
maximum efficie	ious losses in a transfercy of transformer.	A CONTRACTOR OF THE PARTY OF TH		CO4, L4	4
HZ system. Cale	tion motor is wound for culate (i) Synchronous (iii) Rotor Current free	speed (ii) Speed of	the motor	CO4, L5	4
Discuss various c	omponents of LT Switc	hgear.		CO1, L2	4
Describe the cons	truction and working of	3 phase Induction m	otor.	CO3, L6	8
e Outcomes (CO)					
ts will be able to		The state of the s			
	or of electrical and ma				
Inculcate the unders	tanding about the AC	fundamentals.			
Transition,	nent of transformers i				power
Select the type of ger	ierator / motor requir	ed for a micular a	polication		
	electrical networks.	The second secon	Privation		

RBT Classification	Lower Order	Thinking Levels	(LOTS)	Higher Order Thinking Levels (HOT				
RBT Level	LI	L2	L3	L4	L5	1.6		
BT Level	Remembering OTE 10	Understanding	Applying	Analyzing	Evaluating	Creating		



	Departmen	ngineering College, Li	udhiana	
Program	Departmen	Prucu Science		
	B.Tech. (CSE/IT)	Semester	1 st	
Subject Code	BSC-103	Subject Title		
Mid Semester Test	2 nd	Course	Mathematic	cs 1
(MST) No.		Coordinator(s)	Prof. Rajbin Prof. Sukhr Singh,	r Kaur, ninder
Max. Marks	24	Time D	Dr. Sandeer	
Date of MST	22 nd April,2024	Time Duration	1 hour 30 m	inutes
AT		Roll Number		mutes
Note: All questions are o	Compulación			
Q.No.	ompulsory.			
	Question			
Evaluate $\lim_{x\to c}$			COs, RBT	Marl
$\frac{1}{x} \rightarrow c$	$\infty \left(1+\frac{1}{x}\right)$.		CO3, L2	
Evaluate the :			003, 152	2
-ace the imp	Proper integral $\int_{-1}^{1} \frac{1}{x_2^2}$	dx	CC2 x	
	13		CO2, L5	2
Toct +1				
rest the convers	250			
rest the converge	ence of the series:			
$1 + \frac{2x}{4} + \frac{3^2x^2}{4}$	ence of the series: 4^3x^3		CO6, L3	4
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	ence of the series: $\frac{4^3x^3}{41} = = -$	$(n+1)^n \chi^n$	CO6, L3	
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} +$	ence of the series: $\frac{4^3x^3}{4!} =$	$-+\frac{(n+1)^n x^n}{(n+1)!}+$	CO6, L3	
$\begin{vmatrix} 1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \\\infty. \end{vmatrix}$	$\frac{4^3x^3}{4!}$		CO6, L3	
$\begin{vmatrix} 1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \\\infty. \end{vmatrix}$	$\frac{4^3x^3}{4!}$		CO6, L3	
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!}$	s of x.		
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!}$	s of x.	CO3, L3	
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!}$	s of x.	CO3, L3	4
$\begin{vmatrix} 1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \\\infty. \end{vmatrix}$	$\frac{4^3x^3}{4!}$	s of x.		4
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!}$ $g(1+x) \text{ in powers}$ relation of beta and	s of x. I gamma functions:	CO3, L3	4
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!}$ $g(1+x) \text{ in powers}$ relation of beta and	s of x. I gamma functions:	CO3, L3	4
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!}$ $f(m,n) = \frac{\gamma(m)}{\gamma(m)}$	s of x. I gamma functions: $\frac{1}{n}\gamma(n)$ $\frac{1}{n+n}$	CO3, L3	4
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!} = -\frac{1}{\sqrt{m}}$ The relation of beta and the second secon	s of x. I gamma functions: $\frac{1}{n}\gamma(n)$ $\frac{1}{n+n}$	CO3, L3	4
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!} = -\frac{1}{\sqrt{m}}$ The relation of beta and the second secon	s of x. I gamma functions: $\frac{1}{n}\gamma(n)$ $\frac{1}{n+n}$	CO3, L3	4
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!} = -\frac{1}{\sqrt{m}}$ The relation of beta and the second secon	s of x. I gamma functions: $\frac{1}{n}\gamma(n)$ $\frac{1}{n+n}$	CO3, L3	4
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!} = -\frac{1}{\sqrt{m}}$ The relation of beta and the second secon	s of x. I gamma functions: $\frac{1}{n}\gamma(n)$ $\frac{1}{n+n}$	CO3, L3	4
$1 + \frac{2x}{2!} + \frac{3^2x^2}{3!} + \frac{3^2x^2}{3!$	$\frac{4^3x^3}{4!} = -\frac{1}{\sqrt{m}}$ The relation of beta and the second secon	s of x. I gamma functions: $\frac{1}{n}\gamma(n)$ $\frac{1}{n+n}$	CO3, L3	4 4

Q6

	Progr	am	Guru Nanak De	v Engineering College, Lud			*
			Departi	ment of Applied Sciences	hiana		
	Mid Se	emester Test (MST) No.	- 1 ECH // SE and	Semester	Ta		
	1	mester Test (MST) N	BSC-101	Subject Title	2		
		(2	Course Coordinator(s)	Di		
				oordinator(s)	Phy	sics	
	Max. Marks			,	UT	Harpreet Kaur, Eth, Dr. Paramiir	
	Dota 6	arks			Sing	th, Dr. Paramjit s	r. Randhir
	Date of	MST	24	Time D	Dr.	Amariot Kaur	oingh,
	Non		24, APRIL, 2024	Time Duration	Sing	h	Jaspreet
	O Ni	tempt all qua	, 2021	Roll Number	1 ho	ur 30 minutes	
	V. No.	tempt all questions					
	<u></u>		0				
	Q1	If OV	Questi	on			
	Q2	$(x, y, z) = 2x^3z -$	324 1 2 3 2 2 4	e gradient of Ø at point (1, -2		COs, RBT	1-
1		Compare dam	$3xy + 3x^3z^2$, find th	e gradient of Ø at no		level	Marks
	Q3	Compare damped and a	indamped oscillations	- at point (1, -2	2,1).		1
		(a) Determine the	cuil 1 1			555, E1	2
1		at point (12)	and divergence	of $F(x,y,z)=2x^2y^3 \hat{i} + x^3z^2$		CO5, L5	2
1		(b) What will be a).	$(3,-) (2x-y)^3 i + x^3 z^2$	$\hat{i} + 3xyz\hat{k}$	CO1, L3	
10	24	for the electric	ne electric field vector	E and its man		001, 13	(2+2=4)
		Derive mathematical	the electric field vector potential $V(x, y, z) = 0$ lationship between plants	E and its magnitude at point $5x^2 + x^2y^2 - 2\log z$. Asse velocity & group velocity for non-relativist	t P (-1.2.1	CO1, L3	
	, 1	show that particle	lationship between pl	lase velocities	, , , ,	CO1, L3	
Q	5	motion.	city is equal to groun	velocity & group velo	city. Also	CO3, L3	
		a) A sim I d		pase velocity & group velocity for non-relativist	ic case of	CO3, L3	4
		Write la	rmonic motion is repr	esented by $x(t) = 20\pi \sin 0.5$,		
		Phone down	its amplitude anon	esented by $x(t) = 20\pi \sin 0.5$ lar frequency, frequency at in m and time in s	0(t+0.05)	COLT	
1	-	b) Show of	placement is measured	irequency, frequency a	and initial	CO4, L4	(2+2=4)
100		Show that to	placement is measured otal energy of simple I	in m and time in s.	THE THE PARTY	00.	
1 Q5		(a) Write Mant of tin	ne.	in m and time in s.	ant at any	CO4, L4	
		Schail Wax Born'	s interpretation of	ve function. Derive time incotion of a free particle and	an ally		
		Schrodinger wav	e equation for 1 D	ve function. Derive time incotion of a free particle and	denon de	0.0	
1		(b) A importance.	Taddon for 1-D m	otion of a free particle and	deinent	CO3, L6	(4+2+2=8)
1		An electron in	~		BIVE ILS		
1		Estimate the ener	rgies correctioned imen	sional potential box of let the ground state and 2 nd Js, mass of an electron	noth 28	CO3, L3	
		quantum states in	eV. (h= 6.626 10331	the ground state and 2 nd Js, mass of an electron= 9.	igin 5A.		
-		Kg).	(n 0.026 x 10 ⁻⁵⁴	Js, mass of an electron o	excited	CO3, L5	
		(c) Calculate de-Bro	glie would) a proton accelerated the kg object moving with	1 × 10 31		
		potential difference	of 200 ength of i) a proton accelerated the			
	1	m/s Given b-	of 300 V and ii) 10	kg object moving	rough a		
		Joule 11 0.0	Joule-sec m) a proton accelerated the kg object moving with sp	eed of 2		
	1		7 ***	kg, leV = 1	1.6x10 ⁻¹⁹		
		Joure.					
Ourse	Outco						
Course	Outcomes		le to				
Course	Outcomes	(CO): Students will be ab	le to				
Course	Solve	(CO): Students will be ab	le to				
Course	Solve	(CO): Students will be ab	le to of electromagnetism. las	ers and fiber ontice			
Course	Solve	(CO): Students will be ab	le to of electromagnetism. las	ers and fiber ontice		hnology	
Course	Apply Recogn	the problems in the fields the knowledge acquired the inadequacy of claring places.	of electromagnetism. lass from the study of semicon ssical mechanics for cert	ers and fiber optics. Inductors to identify their use ain physical problems and the	in latest tec		
Course	Apply Recogn using pi	the problems in the fields the knowledge acquired the inadequacy of clarinciples of quantum physhend the concept of oscillation.	of electromagnetism. lass from the study of semicon ssical mechanics for cert sics.	ers and fiber optics. Inductors to identify their use ain physical problems and the	in latest tecus find the s	solutions of these	e problems
Course	Apply Recogn using pr Compre	the problems in the fields the knowledge acquired the inadequacy of clarinciples of quantum physhend the concept of oscilland the basis and th	of electromagnetism. lass from the study of semicon ssical mechanics for cert sics.	eers and fiber optics. Inductors to identify their use a lain physical problems and the lement the same in the theory	in latest tecture find the s	solutions of these	
Course	Apply Recogn using pr Compre	the problems in the fields the knowledge acquired the inadequacy of clarinciples of quantum physhend the concept of oscilland the basis and th	of electromagnetism. lass from the study of semicon ssical mechanics for cert sics.	eers and fiber optics. Inductors to identify their use a lain physical problems and the lement the same in the theory	in latest tecture find the s	solutions of these	
Course	Apply Recogn using pr Compre	the problems in the fields the knowledge acquired the inadequacy of clarinciples of quantum physhend the concept of oscilland the basis and th	of electromagnetism. lass from the study of semicon ssical mechanics for cert sics.	eers and fiber optics. Inductors to identify their use a lain physical problems and the lement the same in the theory	in latest tecture find the s	solutions of these	
Course	Apply Recogn using pr Compre	the problems in the fields the knowledge acquired the inadequacy of clarinciples of quantum physhend the concept of oscilland the basis and th	of electromagnetism. lass from the study of semicon ssical mechanics for cert sics.	eers and fiber optics. Inductors to identify their use a lain physical problems and the lement the same in the theory	in latest tecture find the s	solutions of these	
	Apply Recogn using pr Compre	the problems in the fields the knowledge acquired the inadequacy of clarinciples of quantum physhend the concept of oscilland the basic characterist pultidisciplinary knowledge possible solution/model.	of electromagnetism. lass from the study of semiconssical mechanics for cert sics. Ilations and hands to implics of materials relevant ge of science for reviewing	ders and fiber optics. Inductors to identify their use and in physical problems and the lement the same in the theory to engineering and technologing complex problems from the complex problems and the complex problems from the complex problems from the complex problems from the complex problems and the complex problems from the complex problems are complex problems.	in latest tectus find the say of maching application	es. ons. gles/perspective	
Classit	Apply Recognusing pr Compre Understa Apply m the best pr fication	the problems in the fields the knowledge acquired the knowledge acquired the knowledge acquired the knowledge acquired the problems of quantum physhend the concept of oscilland the basic characteristical tridisciplinary knowledges in the consible solution/model. Lower Order Thinkin	of electromagnetism. lass from the study of semiconssical mechanics for cert sics. Illations and hands to implice of materials relevant ge of science for reviewing Levels (LOTS)	ers and fiber optics. Inductors to identify their use and in physical problems and the lement the same in the theory to engineering and technologing complex problems from the digher Order	in latest tectus find the say of maching application. Thinking L	es. ons. gles/perspective	
Classit	Apply Recogn using pr Compre Understa Apply m the best p fication	the problems in the fields the knowledge acquired the inadequacy of clarinciples of quantum physhend the concept of oscilland the basic characterist sultidisciplinary knowled possible solution/model. Lower Order Thinkin	of electromagnetism. lass from the study of semiconssical mechanics for certisics. Ilations and hands to implics of materials relevant ge of science for reviewing Levels (LOTS)	ders and fiber optics. Inductors to identify their use and in physical problems and the lement the same in the theory to engineering and technologing complex problems from the complex problems and the complex problems from the complex problems from the complex problems from the complex problems and the complex problems from the complex problems are complex problems.	in latest tectus find the say of maching application	solutions of these	

Understand various terms Engineering requirement. Conceptualize, and deliver Apply rules and convention Learn and apply orthograph Integrate ideas for offering Use computer to draw engin	of it ourse Outcomes (CO) fudents will be able to	Q6 Draw isometric projections mm thickness having a cube	cone 8 mm away from the view Q5 Differentiate between line	containing that corner is in projections in third angle Q4. A right circular cone, dian		Q1 Differentiate between right and oblique solids	Q. No.	Note: Att	Max. Marks	Mid Semester Test (MST) No.	Subject Code	Program	Gui
Understand various terms used in engineering drawing and Interpret the drawing in terms of Engineering requirement. Conceptualize, and deliver the fundamentals of engineering drawing for any given application Apply rules and conventions as per International Standards for engineering drawing. Learn and apply orthographic as well as isometric projections as per engineering requirement. Integrate ideas for offering efficient and effective solutions to the engineering problems. Use computer to draw engineering drawings (2D) and basic 3D models.	which in turn is having a sphere of 25 mm diameter resting centrally on top of it of it Outcomes (CO) will be able to	Draw isometric projections of a cylindrical block of 50 mm diameter and 20 CO2,	cone 8 mm away from the axis. Draw its front view, top view and left side Differentiate between line and ray, copy and array, trim and delete	rests on one of its base corners on ground plane such that its long edge containing that corner is inclines to the ground plane ate 45°. Draw its A right circular cone, diameter of base 45 mm, axis 55 mm long.	A right regular pentagonal prism side of base 25 mm of 2 cone?	ght and oblique solids	Oction	26 -4-2024 Roll Number	24 Time Duration	1 Course Coordinator(s)		B. Tech. (CSE) E Semester	Guru Nanak Dev Engineering College, Ludhiana
t the drawing in ter for any given app neering drawing. engineering requires gineering problem els.	CO4,	CO4, L4 und 20 CO2, CO3	n CO3,			COs, RBT		2315758		Jaswinder singh	Engineering Graphics And		na
ms of lication rement.	C	4 0	4	4	2	Marks					ics And		

RBT Level Name	RBT Level Number	Classification
Remembering	L1	Lower Order
Understanding	L2	Thinking Levels
Applying	L3	(LOTS)
Remembering Understanding Applying Analyzing Evaluating	L4 L5	Lower Order Thinking Levels (LOTS) Higher Order Thinking
Creating	16	king Levels (HOTS)

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		Departme	Engineering College, Ludh	iana	
Prog	ram	B.Tech. (CSA,	Applied Science		
			CSB,CSC,CSD,CSE, ITC,ITB)		
Subject Code Mid Semester Test No.		HSMC-103	Subject Title		
		2	Course Coordinator	PEEM	
N/			- Condition	Dr. Puran Singh Pf. Jasmine Kaur	
	Marks	24	Time Duration	1 hour 30 minutes	
Date	of MST	23-04-2024	Roll Number	1 nour 50 minutes	
Note:	Attompt all asset				
Q. No	Attempt all questions				
		Question		COs, RBT level	Marks
Q1	Differentiate be	tween cost and price		CO1,L1	
Q2	Units of labour	r TP	MP	CO2, L1	2 2
	1	10	- 10		2
	2	30	- 20		
	Galante de M	45-			
Q3	Calculate the M	issing figures.			
25	Nature plays rol increasing return	CO6, L4	4		
04	Explain the cond	cept of Learning curve.			
	Zipiam die con	cept of Learning Curve.		CO3, L2	
					1
Q5	Explain the relat	ion between TFC, TVC, T	C	CO3,L3,L4	4
26	Calculate			000,00,07	-
	I. Break ev	en point in units		CO6, L6	
	III. P/V ratio				
	IV. Margin o				
	Given:			·	8
	Given: Fixed cost= Rs 90	000			8
	Given: Fixed cost= Rs 90 Selling Price= Rs	000 5 per unit			8
	Given: Fixed cost= Rs 90 Selling Price= Rs Variable cost= Rs	5 per unit			8
	Given: Fixed cost= Rs 90 Selling Price= Rs Variable cost= Rs	5 per unit	00		8
urse	Given: Fixed cost= Rs 90 Selling Price= Rs Variable cost= Rs	000 5 per unit	50		8
urse	Given: Fixed cost= Rs 90 Selling Price= Rs Variable cost= Rs Outcomes (CO)Stud	5 per unit 3 Per unit 2 Ps 30, 00 lents will be able to			8
urse	Given: Fixed cost= Rs 90 Selling Price= Rs Variable cost= Rs Outcomes (CO)Stud	5 per unit 3 Per unit be able to mics and basic concepts	3.		8
urse	Given: Fixed cost= Rs 90 Selling Price= Rs Variable cost= Rs Outcomes (CO)Stud Understand econo Understand deman	5 per unit 3 Per unit be able to concepts and and its application in	analyzing consumer beha	vior.	8
urse	Given: Fixed cost= Rs 90 Selling Price= Rs Variable cost= Rs Outcomes (CO)Stud Understand econo Understand deman	5 per unit 3 Per unit be 2 Ps 30, och dents will be able to mics and basic concepts and and its application in arious factors of product	analyzing consumer behation.	vior.	8
urse	Given: Fixed cost= Rs 90 Selling Price= Rs Variable cost= Rs Variable cost= Rs Outcomes (CO)Stud Understand econo Understand deman Evaluate cost of variable co	5 per unit 3 Per unit be able to mics and basic concepts and and its application in arious factors of product and efficient use of various	analyzing consumer beha tion. us cost analysis.	vior.	8
urse	Given: Fixed cost= Rs 90 Selling Price= Rs Variable cost= Rs Variable cost= Rs Outcomes (CO)Stud Understand econo Understand deman Evaluate cost of variable	5 per unit 3 Per unit 4 Sents will be able to mics and basic concepts and and its application in arious factors of product and efficient use of various aniques for replacement	analyzing consumer beha tion. us cost analysis.		8

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RBT Classification	Lower Order T	Thinking Levels	Higher Order Thinking Levels			
RBT Level Number	LI	L2	1.3	I A	Levels	
RBT Level Name	Remembering	Understanding	Applying	Analyzina	LS	L6
			T. Philip	Analyzing	Evaluating	Creating