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Dept.:	Dept.: Civil Engg. CSE CSE (AI & ML) CSE (DS) ECE EEE ME BS &H
Olyani	mic Year 2021 -22
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AC 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

Commendable Excellent

Good Satisfactory

8. General Remarks

Signature Signature

AC 23

NSRIT

Semester End Regular/Supplementary Examination, April - 2022

Nedimpalit Salvanaravana Raju Institute of Reconding (Paulonomous) (OAO Corality Vianagement System) (ONS)

	neditee		Commor	to All		Academic Year	2021 -	2022
1	Course C	ode 20HSX01 Test Duration	3 Hrs.	Max. Marks	70	Semester	1	
1	Course	COMMUNICATIVE ENGLISH						
-	Part A (S	hort Answer Questions 5 x 2 = 10 Marks)	9					
	No.	Questions (1 through 5)		11 121		Lograina Outea	/-\	Del
	1	What according to Kalam were the essential	elements	of a strong na	tion?	Learning Outco 20HSX01		DoK
	2	When does ordinary men and women become	me great	hemes accor	dina to	2013/01.	. 1	L1
	2	Nehru?	ino groat	101003 80001	ding it	20HSX01.	.2	L1
	3	Why did Salya Nadella come to Microsoft wh	nen he had	a choice?		20HSX01	3	L1
	4	Give the meaning of "Stay Hungry, Stay Foo	lish," in yo	ur own words		20HSX01		L1
	5	Write briefly on Hawking's childhood and ear	ly education	on		20HSX01		L1
	Part B (L	ong Answer Questions 5 x 12 = 60 Marks)						
	No.	Questions (6 through 15)			Marks	Learning Outco	mo (c)	Dol
	6 (0)	Summarize the story "Deliverance" writte	en by Mu	nshi Prem		M 00	1	DoK
	6 (a)	Chand			6M	20HSX01	.1	L2
	6 (b)	Write a paragraph on "Airplanes have chang	ed our live	s"	6M	20HSX01	.1	L2
			OR					
	7 (a)	Discuss on the various elements that Abdul	Kalam talk	ed about in	04.4	70110704		
	. (-)	his Presidential Address			M8	20HSX01		L2
		Fill in the blanks with suitable affixes						
		1. He was acting in a very way (child)		6				
	7/61	2. She looked She started to cry (ha	арру)					
	7 (b)	3. He passed his exam. He was	_ for the s	econd time	4M	20HSX01	.1	L2
		(succeed)						
		4. The team that he supported was able	to win th	e				
		(champion)						
		The noom 'Rosem Criedd' reflects the next	O					
	8 (a)	The poem 'Bosom Friend' reflects the poet the caste prejudices. Substantiate,	is strong	objection to	8M	20HSX01	.2	L2
		Fill in the blanks with Prepositions:					_	
		The man was killed an axe						
	8 (b)	Children usually fond chocolates			4M	20HSX01	2	1.4
	_ ` ′	3. We have finished the project 9:00 am			77171	2003/01	.4	L1
		4. Salman is standing his parents						
		<u> </u>	OR					
	9 (a)	Nehru inspired Indira Gandhi through his let	ters. Subs	antiate with				
	3 (4)	reference to 'Nehru's letter to his daughter, I	ndira on h	er birthday'	6M	20HSX01	.2	L2
		You are a sales representative of ETC Enter	erprises. V	/rite a letter				
	9 (b)	to Mr. James of Hitachi, introducing one of	your new	products or	Chi	001101/04		
	0 (0)	services. Be sure to cover all the importa	nt details	about your	6M	20HSX01	.2	L2
		products/services						
	10 (-)	"The best work happens when you know tha	it it's not ju	st work, but				
	10 (a)	something that will improve other people's	lives." Ex	plain in the	8M	20HSX01	.3	L2
		context of the email written by Salya Nadella	to his em	ployees				
		Fill in the blanks with suitable verb forms:						
	10 (b)	My brother (pay) fee regularly Ramana (visit) Agra recently			42.5			,508
	10 (0)	Ramana (visit) Agra recently Prathima (be) a house-wife			4M	20HSX01	.3	L1
		4. If CM calls on, we (talk) to him						
		TO THE TRANSPORT OF THE STATE O						

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Visakhapatnam

	UR				
11 (a)	Virginia Woolf's imaginative reconstruction of Judith's tale highlights the plight of woman of genius born in Shakespeare's time. Discuss Provide one word substitute for the following:	8M	20HSX01.3	L2	
11(b)	 One who questions everything That which cannot be avoided One who looks the darker side of everything One who is easily deceived 	4M	20HSX01.3	L1	
12 (a)	Do you agree with Steve Jobs' philosophy - You have to trust in something - your gut, destiny, life, karma, whatever. Justify Paraphrase the following text:	6M	20HSX01.4	L2	
12 (b)	Newspaper headlines are excellent examples of compressed language – passive phrases, noun phrases or to-infinitive phrases instead of complete sentences. This is done to save on space and to make headlines quite catchy and spicy. Since most news reporting is about what happened in the most recent past, much of news reporting is in the past tense forms but where newspapers report events to come, a variety of future time references may be used. This is an important point to remember when using information in news headlines to complete a news	6M	20HSX01.4	L2	
	story or to develop news headlines from a given news story				
13 (a)	OR Explain the poem "Telephone Conversation" in your own words. Change the following into Reported Speech:	8M	20HSX01.4	L2	
13 (b)	 "Tomorrow is a holiday and all shops will remain closed," the shopkeeper said "I may return the cassette to her" said Venkat Ramana "Bring the culprit to me," the policeman said "Don't touch the door, the paint is wet," the painter said 	4M	20HSX01.4	L2	
14 (a)	The state of the s	6M	20HSX01.5	L2	
14 (b)	All of us suffer from headache. It can be of many types. The tension headache is short lived. But there can be headache due to body posture. Migraine headache is caused due to nausea, vomiting, and irritability. In headache pain starts from irritated		20HSX01.5	L2	
15 (a		6M	20HSX01.5	L2	
15 (b	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6M	20HSX01.5	L2	

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Dept.: Civil Engg. | CSE | ECE | EEE | ME | BS &H

Name Organi Acade Semes	of the Reviewer: Dr. A. LAKSHMAN Designation ASSOC: Professor zation: Vignan's Institute of Enformetin Technology Reter
Curse	Title: LA & DE
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AC 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh





		14.1	ANUT
Degree Course Course	Code 20BSX11 Test Duration 3 Hrs. Max. Marks 70	Academic Year 2021 Semester	- 2022 I
Part A No.	(Short Answer Questions 5 x 2 = 10 Marks) Questions (1 through 5)	Learning Outcome (s)	DoK
1	Find the rank of the matrix $\begin{bmatrix} 1 & 2 & 3 \\ 3 & 4 & 5 \\ 4 & 5 & 6 \end{bmatrix}$	20BSX11.1	L1
2	Write the nature of the quadratic form $2x^2 + 2y^2 + 2z^2 + 2yz$	20HSX11.2	L1
3	Solve $ (y^2 - 2xy)dx = (x^2 - 2xy)dy $	20HSX11.3	L2
4	Give the general solution of $\frac{d^2y}{dz^2} + \frac{dy}{dz} + y = 0$	20HSX11.4	L2
5 Port P	Write the properties of Jacobians	20HSX11.5	L1
No.	(Long Answer Questions 5 x 12 = 60 Marks) Questions (6 through 15) Define the rank of the matrix and find the rank of the	Learning Outcome (s)	DoK
6 (a)	matrix A = $\begin{bmatrix} 2 & 1 & 3 & 5 \\ 4 & 2 & 1 & 3 \\ 8 & 4 & 7 & 13 \\ 8 & 4 & -3 & -1 \end{bmatrix}$ by reducing into Echelon 6M	20BSX11.1	L2
6 (b)	form. Find whether the following equations are consistent, if so solve them. $x + y + 2z = 4$; $2x - y + 3z = 9$; $3x - y - z = 2$ OR	20BSX11.1	L3
7 (a)	Determine the rank of the matrix $A = \begin{bmatrix} 1 & 2 & 1 & 0 \\ -2 & 4 & 3 & 0 \\ 1 & 0 & 2 & -8 \end{bmatrix}$ 6M by reducing to normal form.	20BSX11.1	L3
7 (b)	Find the Eigen values and the corresponding Eigen Vectors of A = $\begin{bmatrix} 8 & -6 & 2 \\ -6 & 7 & -4 \\ 2 & -4 & 3 \end{bmatrix}$ 6M	20BSX11.1	L2
	Diagonalize the matrix		
8 (a)	$\begin{bmatrix} 2 & 1 & -1 \\ 1 & 1 & -2 \\ -1 & -2 & 1 \end{bmatrix}$ 6M	20HSX11.2	L2
8 (b)	Explain Cayley – Hamilton theorem. For the matrix 'A' find its inverse using Cayley – Hamilton.	20HSX11.2	L2

Controller of Examinations

	7	2	2
A	-61	Ĩ.	2 2 -1
	ŧi .	2	-1

	OF:			
R	teduce the quadratic form			
9 ($x_1^2 + 3x_2^2 + 3x_3^2 - 2x_2x_3$ into the canonical form	1213	20HSX112	L
a	and hence find its Nature, Rank. Index and Signature			
lû (a)	Solve $v(v) + 2v v hh + v(v) = v v hh = 0$	61.1	20H5x11	L
10 (0)	Find the orthogonal trajectories of the family of the	tif.	20H5711	L.
	cardioids $r = a(1-\cos\theta)$			
11 (ā)	Solve $(1+y^2)dx = (\tan^{-1}y - x)dy$	bl.:	20HSA11.5	L_
11 (b)	In a certain chemical reaction the rate of conversion of a substance at time t is proportional to the quantity of the substance still untransformed at that instant. At the end of one hour 60 grams remain and at the end of four hours 21 grams. How many grams of the first substance were there initially?	61.1	20HSX11.3	Ľ3
12 (a)	Solve the differential equation $\frac{d^2y}{dx^2} = 3\frac{dy}{dx} + 2y = xe^{3x} + sin2x$	61.1	20HS飞114	L
	The voltage V and the current ratio distance v from the sending erit of the transmission line satisfy the equations			
12 to	$\frac{dV}{dz} = \frac{Rt}{Rt}, \frac{dt}{dz} = \frac{GV}{GV}$	61.	20HSX11 -	Lo
	where R and G are constants. If $V = V0$ at the sending end $(v = 0)$ and $V = 0$ at receiving end $v = 1$. Show that			
	$\nu = V_0 \left\{ \frac{\sin h n(l - x)}{\sinh nl} \right\}, when n^2 = h$			
	OR	3	AND VIII	1.9
13 la	Solve (1) + 37 + 211 = c + c + co-	61.1	20HSX11.4	
13 (b)	Using method of variation of parameters solve $1 + 4x + 1 cm + x$	61.1	20HSX114	L
1-1	Verify Rolle's theorem for f(x) = (x - a)** (x-b) where m, n are positive integers in [a, b] OR	1,210	20HSX115	L?
15	If $r = r \sin \theta$ Cos ϕ , $\gamma = r \sin \theta$ Sin ϕ , $z = r \cos \theta$ then show that $\frac{r(x,y,z)}{c(r,\theta,\varphi)} = r \sin \theta$	1211	20HSX11.5	L2

G. Keljari

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NSRIT (A) -Visakhapatnam-

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Acade: Semes	of the Reviewer : K.A. NAIDU Designation : Ast. Potenne designation : Ast.						
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Signature

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Semester End Regular/Supplementary Examination, April – 2022

Newjoy all Salvantia and required from the following the second of the s

Degree Course Code Course		B. Tech. (U. G.) 20ESX03 BASIC ELECTRIC	Program Test Duration CAL ENGINEERING		EE Max. Ma	ırks 70	Academic Year Semester	2021 - 2022 f
Part No.	A (Short A	nswer Questions :	5 x 2 = 10 Marks)					
1		hm's law					Learning Outcome	
2			h in DC machines?				20ESX03.1 20ESX03.2	L1
3		mer works on which					20ESX03.3	L1
4		Distribution Factor I					20ESX03.4	L1
5		three applications of					20ESX03.5	L1
Part		swer Questions 5					2003/03.3	L1
No.	Question	s (6 through 15)				Marks	Learning Outcome	(s) DoK
6 (a)	Derive	the relationship for	or converting a	3-terminal	delta-			
o (a)	connecte	ed resistance into a	n equivalent star.			6M	20ESX03.1	L3
	By using the equiv	alent resistance be	mation for the follow etween terminals a a	ing figure, (and b.	obtain			
6 (b)		25 \O 10 \O	20/02			6M	20ESX03.1	L3
	11100							
		5.02	15.5	.1				
	A							
				OR				
7 (a)	Explain i	n detail about Kirch	hoff's Current and \		V.	6M	20ESX03.1	L2
7 (b)			values of the sinus			6M	2pESX03.1	L3
8					10000			Lo
0	exhiam n	ne Operation of 3 p	oint starter with a n			12M	20ESX03.2	L2
	Derive th	e FMF equation o	f a DC generator a	OR	ntion			
9	the main	parts in a DC mach	ine construction	iliu disti ilik	endon	12M	20ESX03.2	L3
10 (a)	Draw (n	e on-load phasor o	liagrams of practical	al transform	er for	6M	20ESX03.3	L2
	unity, la	gging and leading p						42
10 (b)	Delive	he EMF equation o	r a transformer.	0.0		6M	20ESX03.3	L3
	Explain of	nen circuit and sh	ort circuit tests of	OR				
11	neat circui	t diagrams.	on chount tests of	transionnei	r with	12M	20ESX03.3	L2
12	Explain th	e constructional	details of an alter	nator with	neat	4011	00000000	
	sketches					12M	20ESX03.4	L2
40	=	. 19		OR				
13	Explain in	e principle of opera	tion of 3-Ф induction	n motor		12M	20ESX03,4	L2
14	Identify the	e different types of	single phase induc	tion motors	s and	5-5-0-81		
174	explain the	em with diagrams				12M	20ESX03.5	L3
	- 34			OR	70			
15	Explain the	ne working princ	iple of AC serv	o motors	with	12M	20ESX03.5	1.0
	application	5				LEIAI	2003/03.5	L2

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AC-28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizao, Andhra Pradesh



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6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time?
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7.	In general, how do you rate the quality and standard of quartices?



Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh





Commendable Excellent Good Satisfactory

8. General Remarks Good

Signature Signature

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- To uphold research through long term Academia-Industry interaction.
- To inculcate ethical standards and moral values.

Dept.:	Pept.: Dept.: Civil Engg. CSE CSE (AI & ML) CSE (DS) ECE EEE ME BS &H						
Organ	of the Reviewer: M. Syrvanulu Designation: A+St professories professor						
Curse							
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?						
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)						
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ĄG 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh						

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Dept.:	Dept.: Civil Engg. CSE CSE (Al & ML) CSE (DS) ECE EEE ME BS &H
Name Organi Acade Semes	of the Reviewer : Sangcita, P zation : LIET mic Year : 201-1011 ter : T
Curse	Title : Pavgramming for Peoblem solving using &
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
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A G 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

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Dept.:	Dept.: Civil Engg. CSE CSE (AI & ML) CSE (DS) ECE EEE ME BS &H
Name Organi Acade Semes Curse	of the Reviewer: S. omprakash Designation: Asst prof. ization: Rasher Institute of Technology. ster: T
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
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ĄC 23	Form No. AC 23, 00, 2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

Commendable

Satisfactory Good

8. General Remarks

Excellent.



Semester End Regular/Supplementary Examination, April, 2022

Degree Course Course	Code 20ESX02 Test Duration 3 Hrs. Max. Marks	70 S	cademic Year 2021 - Gemester I	2022						
Part A (Short Answer Questions 5 x 2 = 10 Marks)										
No. 1 2 3 4 5	Questions (1 through 5) List the rules to frame identifiers in C Give a code snippet to demonstrate if-else-if ladder Present the syntax for declaring a 3 – d array and give an example Write down the valid operations in pointer arithmetic Give the code snippet to read data from a file (Long Answer Questions 5 x 12 = 60 Marks)		Learning Outcome (s) 20ESX02.1 20ESX02.2 20ESX02.3 20ESX02.4 20ESX02.5	DoK L1 L3 L2 L2 L2						
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK						
6 (a)	Write the algorithm and corresponding flowchart to find the sum of first n natural numbers	8M	20ESX02.1	L3						
6 (b)	Demonstrate the input and output functions of C with two examples each	4M	20ESX02.1	L2						
7 (a)	Write a program that finds the area and perimeter of a square and circle	8M	20ESX02.1	L3						
7 (b)	Discuss on the logical operators and their precedence in C	4M	20ESX02.1	L2						
8 (a)	Differentiate between continue and break statements with appropriate examples	4M	20ESX02.2	L2						
8 (b)	Write a program to get a number and find the sum of the digits in the number OR	8M	20ESX02.2	L3						
9 (a)	Write a program to get two numbers and an operator (+,-,*,/). Do appropriate operation between the two numbers based on the operator. Use switch case statement for the purpose	8M	20ESX02.2	L3						
9 (b)	Discuss about 4 different types of storage classes	4M	20ESX02.2	L2						
10 (a)	Write a program to find the number of occurrences of a character in a character array	4M	20ESX02.3	L3						
10 (b)	Explain any four string functions with examples OR	8M	20ESX02.3	L2						
11 (a)	Write a program to find the column total of each column in a matrix	8M	20ESX02.3	L3						
11 (b)	Demonstrate how user defined functions are declared and used	4M	20ESX02.3	L2						
12 (a)	Explain array of pointers with suitable example	4M	20ESX02.4	L2						
12 (b)	Demonstrate the concept of structures and pointers with example code	8M	20ESX02.4	L3						
13	Write a C program to demonstrate structures and union	12M	20ESX02.4	L3						
14	List 6 different file handling functions and explain their purpose along with the syntax and example OR	12M	20ESX02.5	L2						
15 (a)	List any four preprocessor directives and state their purpose	4M	20ESX02.5	L2						
15 (b)	Demonstrate how command line arguments are processed in a C program with an example code.	8M	20ESX02.5	L3						

Controller of Examinations

NSRIT (A)

Visakhapatnam

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	Civil Engg. CSE ECE EEE ME BS &H
Name Organi Acade Semes Curse	of the Reviewer: Dr-1C·N·Brahmijin zation: RIT(A) mic Year: 204-22 ster: 1 Title: FCS
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
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7.	In general, how do you rate the quality and standard of questions?
AC 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

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Dept.: Dept.: Civil Engg. CSE CSE (AI & ML) CSE (DS) ECE EEE ME BS &H							
Name of the Reviewer: B. Ajay Ram Designation Asst Prof Organization: Lendi Institute of Ergg & Teh Academic Year: 2021-2022 Semester: I Curse Title: Fundamentals of Computer Sciences							
 Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study? 							
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Ac 28. Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh							

Commendable Excellent

Satisfactory Good

8. General Remarks



Semester End Regular/Supplementary Examination, April - 2022

Nathonali Sayabarayana Santinghida o Freathology (Autonomora) @According Vicuacientaliy system (Olys

Degree Course Code Course		B. Tech. (U. G.) 20CS101 FUNDAMENTALS	Program Test Duration OF COMPUTER	CSE/CSM/0 3 Hrs. Ma SCIENCE	CSD ax. Marks	70	Academic Year Semester	2020 -	2021 i	
Part A (Short Answer Questions 5 x 2 = 10 Marks)										
No. Questions (1 through 5)								DoK		
1	Explain th	e need of secondar	y storage				20CS101.		L1	
2	What are	the characteristics	of an algorithm				20CS101	2	L2	
3	Illustrate I	Ring topology in a n	elwork				20CS101.		L1	
	Define int	sadvantages of file elligent systems	oriented approach				20CS101		L1	
3	Denne IIII	emgent systems					20CS101.	.5	L1	
Part B	(Long An	swer Questions 5	x 12 = 60 Marks)							
No.	Questio	ns (6 through 10)	,			Marks	Leaming Outco	me (e)	DoK	
6 (a)	Explain	a hardware com	ponents of a co	mputer syste	em with					
0 (0)	diagram	1				6M	20CS101	1	L2	
6 (b)	Explain system	the input and o	utput devices co	nnected in c	omputer	6M	20CS101	1	L2	
				OR						
7 (a)	Explain	the different types	of memory in comp	puter system		8M	20CS101	1	L2	
7 (b)	Compa	re hardware and so	ftware			4M	20CS101	.1	L2	
8 (a)	Define f	lowchart and Draw	o floweboot for our	ii. 						
8 (b)	Evolain	lowchart and Draw one-zero game	a nowchart for prin	nting N intege	rs	4M	20CS101		L1	
5 (5)	Chpicin	one-zero game		OR		8M	20CS101	.2	L2	
0.7-1	Define	flowchart and	explain different		sed for					
9 (a)	constru	cting flowchart.	sopiali andiciti	Symbols d.	sed to	6M	20CS101	2	L1	
9 (b)		structured program	ming concepts			6M	20CS101	2	L1	
			7,7.7			0.11	2000101	4.	<u>-</u> 1	
10 (a)	Explain	network topologies	with neat illustration	ons		6M	20CS101	3	L1	
10 (b)	Outline	the process manag	ement			6M	20CS101.	.3	L1	
11 (a)	Dannik			OR						
11 (a) 11 (b)	Describe	e any three operation	ng systems with its	features		M8	20CS101.		L2	
۲۱ (U)	Explain	the open system in	ter connection mo	del		4M	20CS101	3	L1	
12 (a)	Explain	the applications of	database system			C0.4	222244			
12 (b)	Summai	rize the queries use	ualavase system of to retrieve the d	ata		8M	20CS101.		L2	
(-)	901111101	neo are queries ase	to realese file o	OR		4M	20CS101.	.4	L1	
12 (=)	Compan	e the database m	odels: Network		1 object					
13 (a)	oriented			elational, and	a object	M8	20CS101.	.4	L1	
13 (b)	List the	advantages and dis	advantages of Da	tabase approa	ach	4M	20CS101.	4	L2	
				.,			2000,01			
14 (a)		e current trends in /				4M	20CS101.	5	L1	
14 (b)	Describe	the machine learn	ing applications			8M	20CS101.		L2	
15 (-)	Cive th	face delle		OR						
15 (a)		foundations of Al				6M	20CS101.		L1	
15 (b)	exhigit) (different types of a	machine learning i	models		6M	20CS101.	5	L2	

Controller of Examinations
NSRIT (A)
Visakhapatnam

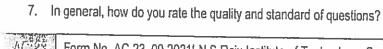
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Dept.: Civil Engg. | CSE | ECE | EEE | ME | BS &H

Name Organ Acade Semes Curse	the control of the co
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在李	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh





K.S.N. 2

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Dept.:	Dept.: Civil Engg. CSE CSE (Al & ML) CSE (DS) ECE EEE ME BS &H
Name Organ	of the Reviewer : Dr. T. Saly alum Designation : ization : VIIT : 2021-22 : ster
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
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Ar tell	No.

Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

Commendable

Excellent

Good Satisfactory

8. General Remarks

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Danne		Semeste	r End Regular/Su		ary Examinati	on, Ap	oril, 2022		
Degree		B. Tech. (U. G.)	Program	ECE			Academic Year	2021 -	2022
Course		20BSX23	Test Duration	3 Hrs.	Max. Marks	70	Semester		1
Course		APPLIED CHEMIS	STRY						
Part A	(Short A	nswer Questions 5	x 2 = 10 Marks)						
No.	Questi	ons (1 through 5)					Learning Outco	nme (e)	DoK
² 1	Write t	he functionality of a	oolymer.				20BSX23		L1
2	Define	Electrolytic conductor	ors.				20BSX23		L1
3	Write S	Schrödinger's equation	on.				20BSX23		L2
4	Write t	he finger print range	of IR Spectroscopy	/-			20BSX23		L1
5 Dord B	vvnat is	s molecular modeling)?				20BSX23	.5	LI
No.	(Long Ar Onesti	nswer Questions 5 : ons (6 through 15)	x 12 = 60 Marks)						
		in stereo specifi	c polymerization	of PVC	in detail with	Mark	3	ome (s)	DoK
6 (a)	mecha	nism.				6M	20BSX23	.1	L2
6 (b)		detailed account on		OR		6M	20BSX23	.1	L2
7 (a)	Write the	he mechanism of Co	ndensation polyme	rization wit	h an example.	GM	20BSX23	.1	L2
7 (b)	prepara	be the importance ation of any two Biod	or Biodegradable	le polyme	rs? Give the	6M	20BSX23	.1	L2
8 (a)	Differer	ntiate between Prim	ary and Seconda	ry referen	ce Electrodes.	6M	OOD GWOO		
8 (b)	Explain Derive	construction of Star the Nernst equation	idard Hydrogen Ele	ectrode.					L2
- (-)		are memor equation	ioi a sirigie electroi	de potentia OR	II.	6M	20BSX23	.2	L2
9 (a)	Explain	construction, working	g and applications	of Ha-Oa fi	uel cell.	6M	20BSX23	.2	L2
9 (b)	Define	conductometric titra	tions? Discuss con	nductomet	ric titrations of				
V (D)	nature	of acids (HCl + Cl of the graphs between	ngCOOH) vs stror	ng base a divolume o	nd explain the	6M	20BSX23	.2	L2
10 (a)	Explain	the energy level dia	grams of O ₂ and N	O molecule	e. Explain their	7M	2000000	2	
10 (b)	Give the	ic nature and bond o e postulates of plank	rder.						L2
(-)				OR		5M	20BSX23	.3	L2
11 (a)	Explain	the crystal field spli	tting and propertie	s of Octah	edral complex	CLI	22224		
11 (b)	fe (CC) ₆]*3.				5M			L2
11 (0)	Discuss	types of conductors	Explain effect of o	doping on o	conductance.	7M	20BSX23	.3	L2
12 (a)	Write a	short note on Nuclea	ar magnetic resona	псе.		5M	20BSX23	А	L2
12 (b)	What a	ire the fundamenta	principles involv	ed in ins	trumental and				
(-,	chemica	al measurements?				7M	20BSX23	.4	L2
13 (a)	How to s	separate the mixture	of cases by using	OR Con Chan					
	Discuss	the potentiometric	methods help to de	etermine H	natography.	6M	20BSX23	.4	L2
13 (b)	acid-bas	se titration.	meanodo neip to di	cionnile (i	ie enabonit ili	6M	20BSX23	.4	L2
44.1=1	187.74								
14 (a) 14 (b)	Write in	detail about supra m	olecules with any t	lwo examp	les.	6M	20BSX23	.5	L2
14 (0)	yvnat is	basic lock and key n	rincinle?			CLI	COROVOO	-	

14 (b)

15 (a)

15 (b)

What is basic lock and key principle?

computational chemistry.

Explain in detail about Quantum Light Emitting Diodes (QLEDs).

Discuss about of Molecular modeling and docking studies in

विन्धार्योभी हिन्दु में इंग्लेक्स के वर्ष दिना विनायोग में उत्तरियोग है। विनायोग के वर्ष विभिन्न के अधिक विभिन्न

Controller of Examinations NSRIT (A) Visakhapatnam

6M

6M

6M

20BSX23.5

20BSX23.5

20BSX23.5

L1

L2

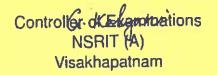
L2



Semester End Regular Examination, April, 2022

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Degree Course Code Course		B. Tech. (U. G.) 20BSX21 ENGINEERING C	Program Test Duration HEMISTRY	CE/ME 3 Hrs.	Max. Marks	70	Academic Year Semester	2021	- 2022 I
No. 1 2 3	Questio Give un Define p Define o	ns (1 through 5) its of hardness of paint. calorific value, HC		o cotting	plantice con	ngt ho	Learning Outcom 20BSX21.1 20BSX21.2 20BSX21.3		DoK L1 L1 L1
4 5	recycled	d. Justify.	of colloids and nanor			not be	20BSX21.4 20BSX21.5		L2 L1
Part B (No. 6 (a) 6 (b)	(Long An Questio Illustrate with nea Explain	swer Questions ns (6 through 15) the softening me at diagram.	5 x 12 = 60 Marks) ethod of water by us procedure of Rever	ing Zeoli	te process,	Marks 6M 6M	Learning Outcor 20BSX21.1 20BSX21.1	ne (s)	DoK L2 L2
7 (a) 7 (b)	Explain Explain	estimation of hard in detail about Ele	ness of water by EC ctro Dialysis?			6M 6M	20BSX21.1 20BSX21.1	1	L2 L2
8 (a) 8 (b)	Write its Define construc	advantages and Secondary Batt ction and working	limitations. ery. Describe the principle of Li ion ba	constru ttery. OR	ection and	6M 6M	20BSX21.2 20BSX21.2		L2 L2
9 (a) 9 (b)	cathodic	c protection metho	n. How to control the ds? is plating (Nickel pla		n by using	6M 6M	20BSX21.2		L2 L2
10 (a) 10 (b)	Explain	the analysis of flu	etrol by Fisher Trop e gas by Orsat appa	ratus. OR		6M 6M	20BSX21.3 20BSX21.3		L2 L2
11 (a)	and net carbon = = 4%, la	calorific value of = 85%, hydrogen tent heat of stean		lowing co , nitrogen	ompositions i = 2%, ash	6M	20BSX21.3	3	L2
11 (b)	Explain significa	the proximate ance.	analysis of a coa	i sampl	e, and its	6M	20BSX21.5	3	L2
12 (a) 12 (b)	Bakelite		erties and applicati			6M 6M	20BSX21.4		L2 L2
13 (a) 13 (b)	applicati Describe	ion.	fecting Refractory and structural rein plications.			6M 6M	20BSX21.4		L2 L2



14 (a)	Give detailed account of SEM technique.	7M	20B\$X21.5	L2
14 (b)	How do you characterize the surface of a substance by X-ray diffraction method?		20BSX21.5	L2
	OR			
15 (a)	Discuss the synthesis of nanomaterials by chemical method. Enumerate the applications of nanomaterials in catalysis. Explain characterization of surface of a substance by TEM.	5M	20BSX21.5	L2
		7M	20BSX21.5	L2

G. Kalyani

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NSRIT (A)
Visakhapatnam



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- To inculcate ethical standards and moral values.

Dept.: Civil Engg. | CSE | ECE | EEE | ME | BS &H Name of the Reviewer: P. Kamelwa? Le Repesignation

1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
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7.	In general, how do you rate the quality and standard of questions?
Æ	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

2021 - 2022

Academic Year

Semester End Regular/Supplementary Examination, April - 2022

Common to CE/ME

3 Hrs. Max. Marks 70 Semester

Nation ally salvagaray at a Rejudiction and Technology (Autonomous) HeACL (Autility Menagement System) (AMS

Test Duration

B. Tech. (U. G.) Program

20ESX01

Degree

Course Code

Course	ENGINEERING DRAWING							
Part A (Short Answer Questions 2 x 5 = 10 Marks)								
No.	Questions (1 through 2) Draw the projections of the following points on a common reference line "XY". Maintaining suitable distance between them and also mention the quadrant they are in.	Learning Outcome (s)	DoK					
1	(i)A point "A" 30mm above H.P and 40mm in front of V.P. (ii) A point "B" 20mm below H.P. and 40mm behind H.P. (iii) A point "D" 15mm above H.P. and 40mm behind V.P. (iv) A point "C" lies on H.P. and V.P. A point P is 15mm above HP and 20mm in front of VP another point	20ESX01,2	L1					
2	Q is 25mm behind VP and 40mm below hp draw p and q projections so that distance between end the projector is 90mm. Assume the position of points in suitable quadrants and draw the straight line joining a) the top views b) the front views.	20ESX01.4	L3					
Part B (L	ong Answer Questions 5 x 12 = 60 Marks)							
No.	Questions (6 through 10)	Learning Outcome (s)	DoK					
3(a)	Construct an ellipse, when the distance of focus from its directrix is 60mm & eccentricity =2/3 also draw a normal and tangent to the curve at a point 50mm from the directrix.	20ESX01.1	L2					
3(b)	Construct a scale of 1:40 to read meters and decimeters and long enough to measure up to 6 meters. Mark a distance of 4.7 meters on it.	20ESX01.1	L3					
4 (a)	Construct a cycloid for one complete revolution of a circle having a 50 mm diameter. Draw a tangent and a normal to the curve at a point that is 35 mm above the base line.	20ESX01.1	L3					
4(b)	Draw a Vernier scale of RF=1/25 to read centimeters up to 4metres and on it, shown lengths representing 2.39 m and 0.91 m	20ESX01.1	L2					
5 (a)	The line AB of 40mm length is inclined at 30° to the H.P. and parallel to V.P. The end point A of the line is 15mm above H.P. and 20mm in front of V.P. Draw the Projections of lines?	20ESX01.2	L3					
5 (b)	A line RS 40mm long is parallel to both the planes. It is 20 mm above the HP and 15mm in front of the VP. Draw the projections of the line?	20ESX01.2	L2					
	OR The line AB is 25mm long is perpendicular to V.P. and parallel to							
6 (a)	H.P. The end points A and B of the lines are 15mm and 40mm away from V.P. The line is 20mm above H.P. draw the projections of line?	20ESX01.2	L3					
6 (b)	A line "PQ" 90mm long is in H.P. and makes an angle 30° with V.P and 40° with HP. Its end point "P" is 25mm in front of V.P. Draw the projections.	20ESX01.2	L2					

	Draw the projections of regular hexagon of 25mm side having one	0050V04 3	L2
7 (a)	of its sides in the H.P and inclined at 60° to the H.P	20ESX01.3	42
	Draw the projections of a circle of 75 mm diameter having the end A	20ESX01.3	L3
7 (b)	of the diameter AB in the HP, the end B in the VP, and the surface	20ESX01.3	25
	inclined at 30° to the HP and at 60° to the VP		
	A square ABCD of 50mm side has its comer A in the H.P its	20ESX01.3	L2
8 (a)	diagonal AC inclined at 30° to the H.P. Draw its projections?	2020/10110	
	Draw the projections of a pentagonal sheet of 26mm side, naving its	20ESX01.3	L3
8 (b)	surface inclined at 30° to VP. Its one side is parallel to VP and inclined at 45° to HP	2020/01/0	
	A hexagonal prism with side of base 25mm and 50mm long is	20ESX014	L2
9 (a)	resting on a corner of its base on HP. Draw the projections of the	2065/014	
	prism when its axis is making 30° with HP and parallel to V.P. Draw the projections of a cylinder 75 mm diameter and 100mm		90.
9 (b)	long. Lying on the ground with its axis inclined at 30° to the VP and	20ESX01.4	L3
- (-)	45°nclned to HP		
	Draw the projections of a cone, base 75mm diameter and axis		
10 (a)	100mm long, lying on the ground on one of its generators with the	20ESX01.4	L2
10 (4)	axis parallel to the VP		
	A square prism of side of base 30 mm and axis 55 mm long lies on one of its generator in the HP and its faces equally inclined to the	compyed (L3
10 (b)	HP. Draw its projections when its axis is inclined at an angle of 60°	20ESX01.4	63
	to the VP?		
	to invest a device from the isometric view		
	Oraw the front view, top view and side view from the isometric view. All dimensions are in mm.		
	All difficulties are in many		
	753	00E0V04 F	L4
11	The	20ESX01.5	L4
	OR		

L4

20ESX01.5

Draw the isometric view of Fig.

12

G. Kalyani

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•	To inculcate ethical standards and moral values.
Dept.:	Civil Engg. CSE ECE EEE ME BS &H
Name Organi Acade Semes Curse	of the Reviewer: Drs. Deeptu Designation: Asst professor ization: Lendi'restitute of engineering and technology. mic Year: 21-22. ster: I applied physics.
	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
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5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?
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7.	In general, how do you rate the quality and standard of questions?
TO SE	Form No. AC 23, 00 2021 N.S. Paiu Inclinita of Tochaslas y Continue 18



00.2021 NS Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

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Dept.: Civil Engg. CSE ECE EEE ME BS &H
Name of the Reviewer : R. Homman he Mo Organization : Lignosis !! T Academic Year : 2020 - 2! Semester : Title : Awice Physica
 Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
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Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh
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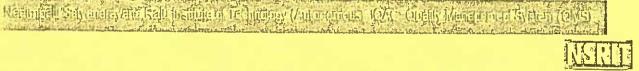
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Dept.: Civil Engg. | CSE | ECE | EEE | ME | BS &H

Name o Organi	of the Reviewer: K. Kirankumar Designation: Anth. Professor ration Raghy Published & Technology ter 2021-2022
Semes	tor 2021-2022
Curse 1	. 9-1
04,00	Are the questions being solvent to the contract to
1.0	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
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4(128	Form No. AC 23, 00,2021I N S Raju Institute of Technology, Sontyam Vizag, Andhro Bradech

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Semester End Regular/Supplementary Examination, April, 2022

Degree Course		B. Tech. (U. G.) 20BSX33	Program Test Duration	CSE, CSM, CSD & 3 Hrs. Max. Mark		Academic Year 20 Semester 20	021 - 2022 I
Course		APPLIED PHYSIC	s				
No.	Question	nswer Questions 5 ns (1 through 5)	x 2 = 10 Marks)			Learning Outcome (s	
1 2	List the p	double refraction? parts of an optical fi				20BSX33.1 20BSX33.2	L1 L1
3 4 5	Recall th	nagnetic susceptibil ne physical significa ne P - Type semi cor	nce of a wave funct	meability, ion.		20BSX33.3 20BSX33.4 20BSX33.5	L1 L2 L1
Part B (nswer Questions 5 ons (6 through 15)	x 12 = 60 Marks)		N. Carolina	1) B.K
6	Explain	the formation of No		OR	Marks 12M	Learning Outcome (s 20BSX33,1	s) DoK L2
7	Describ diagran	e the construction n.	and working of Nico	ol's prism with neat	12M	20BSX33,1	L2
8 (a)	Describ diagran	e the construction.	n and working of	Ruby laser with	10M	20BSX33,2	L2
8 (b)		types of fibres.		OR .	2M	20BSX33,2	L2
9 (a)	What is apertur	numerical aperture e of an optical fibre	e? Derive an expre	ssion for numerical	8M	20BSX33.2	L2
9 (b)		the characteristics			4M	20BSX33,2	L2
10 (a)	Discuss ferroma	s the characteristic agnetic substances	s of diamagnetic, with examples.	paramagnetic and	9M	20BSX33.3	L2
10 (b)		internal field in a d		OR	3M	20BSX33.3	L2
11 (a) 11 (b)	Discuss List any	s various types of portions three applications	olarizations in diele of dielectrics.	ctrics.	9M 3M	20BSX33.3 20BSX33.3	L2 L2
12 (a)	With the for a pa	article in one dimen	fependent Schrodin sional box show th	nger wave equation at the energies are	M8	20BSX33.4	L2
12 (b)		the merits and der	merits of classical fr	ree electron theory.	4M	20BSX33.4	L2
13 (a)		Fermi-Dirac distrib	ution function and	discuss its variation	M8	20BSX33.4	L2
13 (b)		are matter wave ngth of matter wave		xpression for the	4M	20BSX33.4	L2
14	Show I structur	that the Kronig-Pe e in solids.	enney model lead	s to energy band OR	12M	20BSX33.5	L2
15 (a)	On the into con	basis of band theo ductors, semicond	ory, explain how mu	aterials are divided	8M	20BSX33.5	L2
15 (b)		any two applicatio		-11	4M	20BSX33.5	L2

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Dept.: Civil Engg. CSE ECE EEE ME BS &H	
Name of the Reviewer : A Subrahmony Designation Ast. Profine Organization : ANTI Academic Year : 2011-2012 Semester : III Mfg . Processo. 1. Are the questions being relevant to the assessment of Course Outcomes as well as to understand the seminary of t	
1. Are the questions being relevant to the assessment of Course Outcomes as well as to understand to mastery of the learners on that course of study? Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)	he
2. Are the questions being very clear in easily understandable language without any sort of ambiguity?	
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standard of questions?	_
Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyan, Vizag, Andhra Pradesh	

NSRIT

Semester End Examination, February, 2022

Degree		B. Tech. (U. G.)	Program	MECH			Academic Year 202	1 - 2022
Course Code		20ME305	Test Duration	3 Hrs.	Max. Marks		Semester	III
Cou	Irse	MANUFACTURIN	G PROCESS				Jemester .	III
Pan	A (Short An	swer Questions 5	x 2 = 10 Marks)					
No	. Questio	ns (1 through 5)						
1		y four advantage:	s of casting				Learning Outcome (s	s) DoK
2		te the steel makin					20ME304.1	L1
3		y four differences	between the weld	ing and	coldarina		20ME304.2	L2
4	Delille	lorge welding		iing anu :	soluering		20ME304.3 20ME304.4	L2
5	Illustrat	e thread rolling p	rocess.				20ME304.4 20ME304.5	L1 L1
Part	B (Long Ans	swer Questions 5 x	12 = 60 Marks)				20141004.0	El
No	Question	ns (6 through 15)				Made		
6 (a						Marks	Learning Outcome (s	
	- ryhiatti	the various brook	a casting process	with a r	ieat sketch.	6M	20ME304.1	L2
6 (b	patterns	with a neat sket	of pattern and al	so expla	in any three	6M	20ME304.1	L1
				OR				
7 (a) Explain	injection molding	and Blow molding	,		6M	20ME304.1	1.2
7 (b)	vvnat a	re the steps invo	lved in the prepar	ration of	a Casting?	01.4		
	Evhigiti	briefly the die cas	sting process.			6M	20ME304.1	L1
	Explain	the construction	and working -		V			
8 (a)	Furnace	with a neat sket	n and working p	rincipie	of Cupola	6M	20ME304.2	L2
8 (b)			r from fullering in :	Forning -	0			LZ
		-p	r irom idileting in	orging p	rocess?	6M	20ME304.2	L2
9 (a)		o you compar	e forged comp		with cast			
o (u)	compon	ents?			3230	6M	20ME304.2	L2
9 (b)	Explain	the two types of o	rucible furnaces v	vith diagr	ams			
					arrio	6M	20ME304.2	L2
10./-\	Explain	the advantages	and applications	of nxu	-acetylene			
10 (a)	welding.		- It is a second	, o. o.,	doctylene	7M	20ME304.3	L2
40.00	What ar	e the parameter	rs that control th	no wold	gualike in			
10 (b)	manual r	netal-arc welding	?	ic Mein	quality in	5M	20ME304.3	L2
				OR			13111230 1.0	la£,
11 (a)	Explain t	he TIG systems	of arc-welding give	e the a	onlications			
* * (4)	от еасп,					6M	20ME304.3	L2
11 (b)	Explain t	ne MIG systems	of arc-welding giv	e the ar	oplications			
1-7	of each.		5 0			6M	20ME304.3	L2
12 (a)	Dona-ih-	Abo ala t						
12 (a) 12 (b)	Describe	the electro slag w	relding process			5M	20ME304.4	L2
(0)	Describe	ule electron bear	n welding process			7M	20ME304.4	L2
				OR				

AC 15 00 2027 Question Pages for End Semester Examination Academic Regulation 2020

Controller C. Kelyani NSRIT (A)

Visakhanatnam

13 (a)		6M	20ME304.4	L2
13 (b)	What is the term HAZ in welding process explain briefly?	6M	20ME304.4	L2
14 (a)	Explain hot rolling operations through (i) two high (ii) three high and (iii) four high rolling mill	7M	20ME304.5	L1
14 (b)		5M	20ME304.5	L2
15 (a)		4M	20ME304.5	L1
15 (b)	Explain the various methods available for blow moulding of thermoplastics giving their relative applications	f 8M	20ME304.5	L2

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		and moral values.		
Dept.:	Civil Engg. CSE	ECE EEE ME BS &H		
Organ	ization mic Year ster	: B. Ram Vara Prosad : LIFT : 2021-22 : III : Power Generation C	Designation	112013 millio Lootes 801
1.	Are the questions mastery of the lea	being relevant to the assessments on that course of study?	ent of Course Ou	tcomes as well as to understand the
	Yes No. if yes, p	lease rate it on a five-point scale	4	_ (5: High to 1: Low)
2.	Are the questions	being very clear in easily unders	standable langua	ge without any sort of ambiguity?
		lease rate it on a five-point scale		
3.	1	anio:		formation that reduces the students'
	Yes No. If yes, pl	ease rate it on a five-point scale	5	_ (5: High to 1: Low)
4.				the intended knowledge and skill?
		ease rate it on a five-point scale		
5.	Are the questions that facilitates critic	being addressing appropriate c cal thinking and problem-solving	ognitive levels of skills?	Revised Bloom's Taxonomy (RBT)
	Yes No. If yes, ple	ease rate it on a five-point scale	4	_ (5: High to 1: Low)
6.				o evaluate one response at a time?
	Yes No. If yes, ple	ease rate it on a five-point scale	5	(5: High to 1: Low)
7.		you rate the quality and standar		·
AGI23	Form No. AC 23.	. 00.2021 N S Raju Institute of T	echnology, Sont	yam, Vizag, Andhra Pradesh

3 pass

NSRIT

Semester End Examination, February, 2022

Degree B. Tech. (U. G.) Program EEE Academic Year 2021 - 2022

Course Code 20EE305 Test Duration 3 Hrs. Max. Marks 70 Semester III

Course POWER GENERATION AND TRANSMISSION

Part A (Short Answer Questions 5 x 2 = 10 Marks)

No	Questions (1 through 5)			
1	Define a) Economizer h) Preheater		Learning Outcome (s)	DoK
2	List the types of tariffs to calculate energy rate.		20EE305.1	L2
3	List any four types of conductors used in power systems		20EE305.2	L1
4	Define a) Skin Effect b) Corona Loss		20EE305.3	L2
5	Define a) Skin Effect b) Corona Loss Write down the expression feet and the		20EE305.4	L1
	Write down the expression for insulation resistance of a single core cable (Long Answer Questions 5 x 12 = 60 Marks)	a.	20EE305.5	12
	- (=5119 Allawer Questions 5 x 12 = 60 Marks)		11-11-1-	
No.	Ougstions /6 thereat 453			
		Marks	Learning Outcome (s)	DoK
6	With neat sketch, explain the construction and operation of different			DUN
	components of a hydroelectric power plant.	12M	20EE305.1	L2
	1A/het are the OR			
7 (a)	What are the main components of a nuclear power station? Explain the			
	ionogons of each component to ustail	9M	20EE305.1	L1
7 (b)	What are the factors to be considered for selection of site for a thermal			
	power station?	3M	20EE305.1	L1
n	Discussion the following: (i) Connected load, (ii) Demand factor, (iii)			
8	reduction, (IV) Fidelit use (actor, (V) Hase and near load plants, (All)	12M	20EE305.2	1.4
	Spinning reserve.	12111	2022303.2	L1
	OR			
	An electrical supply company having a maximum load of so that			
	Solicities 10V IOL MINE THE SHUTTER SOLICITION CONTINUES PROVIDENCE			
	-991-99te defined of 75 MAY. The Shills expenses including applied			
	on any or one of the contract			
	 For Fuel = Rs. 90 lakhs. 			
9 (a)	 Fixed charges concerning generation = Rs. 28 lakhs; 	4014		
	Fixed charges concerning transmission and distribution = Rs.	10M	20EE305.2	L3
	JE IGNIS:			
	Assuming 90% of the fuel cost is essential to running charges and the			
	The in the control of			
	a two-part tariff to find the actual cost of supply to the consumers.			
9 (b)	What are desirable characteristics of a tariff?			
	and an advantaged of a fatility	2M	20EE305.2	L1
10 (-)	Derive an expression for inductance of a 3-phase transmission line with			
10 (a)	unsymmetrical spacing.	8M	20EE305.3	1.0
40 (6)	A conductor is composed of course idealing	OIVI	20003	L3
10 (b)	A conductor is composed of seven identical copper strands each having a radius r. Find the self-GMD of the conductor.	4M	2000200	
		HIVI	20EE305.3	L3
	Derive an expression for any it			
11 (a)	Derive an expression for capacitance of a 3-phase line when the	01.4		
	AALIAGO(O) O DE AALIITIERICENIA DISCON	8M	20EE305.3	L3
11 (b)	Calculate the capacitance of a 100 km long 3-phase, 50 Hz overhead			
17 (0)	wantermotion life consisting of a controller pack of diameter a controller	4M	20EE305.3	L3
	spaced 2.5 m at the corners of an equilateral triangle.		2022000.0	1.0
	The A, B, C, D constants of a 3-phase transmission line are			
12	11 D (9,00010,010), D=1,33,3±11,138) (1, C=6,0,000,0004,0000,400,0			
	THE TODG OF THE TECEPORAL END IS ALL MANY OF 22D DV WHILE THE TELL OF THE TELL	12M	20EE305.4	L3
	0.86 lagging. Find the magnitude of the sending end voltage, current,			
-				

AG-15-00 202 in Question Paper for End Semester Examination Academic Regulation 2020

Controller of Examinations

NSPIT (A)

	power, line efficiency and the voltage regulation. Assume the magnitude of sending end voltage remains constant.			
13 (a)	OR Explain the classification of lines based on their length of transmission.	CNA	0055005.4	10
, ,	Explain the curse impodence leading with second to an austral	6M	20EE305.4	L3
13 (b)	Explain the surge impedance loading with respect to an overhead transmission line.	6M	20EE305.4	L3
14	Calculate sag and tension of a conductor when, (i) supports are at equal levels and (ii) supports are at unequal levels. Analyze with and without the effect of ice loading and wind.	12M	20EE305.5	L3
	OR			
15 (a)	An insulator string for 66 kV line has 4 discs. The shunt capacitance between each joint and metal work is 10 % of the capacitance of each disc. Find the voltage across the different discs and string efficiency.	9M	20EE305.5	L3
15 (b)	A 3-phase overhead transmission line is being supported by three discs insulator. The potential across top unit (i.e. near the tower) and the middle unit are 8kV and 11kV respectively. Calculate the ratio of capacitance between pin and earth to the self-capacitance of each unit.	ЗМ	20EE305.5	L3





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Dept.:	Civil Engg. CSE ECE EEE ME BS &H
Organ Acade Semes Curse	of the Reviewer: P-Sumayuh Designation: A-51+- Province Year ster Title Fluid Mechani C'
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
3.	question response time?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
4.	Do you observe any of the questions that has less scope to assess the intended knowledge and skill?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
7.	In general, how do you rate the quality and standard of questions?
40.28	Form No. AC 23, 00,2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

NSRIT

Semester End Examination, February, 2022

Degr	ree rse Code	B. Tech. (U. G.) 20CE305	Program Test Duration		gineering Max, Marks	70	Academic Year	2021 - 2022
Cour	rse	Fluid Mechanic		01113.	Wax, Walks	5 /0	Semester	HI.
Part No.	A (Short A	nswer Questions !	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
1 1	Define	ons (1 through 5)					Learning Outcom	e (s) DoK
2	Classif	mass density and	weight density.				20CE305.1	L1
3	What a	y the velocity potence Newtonian and	Mon Nouton and	stream	function.		20CE305.2	L2
4	Define	draft tube.	i Mon-Mewtonian	ilulas?			20CE305.3	L1
5		our methods to co	Introl boundary los				20CE305.4	L1
Part I	B (Long An	swer Questions 5	x 12 = 60 Marke)	yeı.			20CE305.5	L1
No.	Questio A Recta in such	ns (6 through 15) Ingular plane surfac a way that its plan	ce 1 m wide and 3	in annia i	of 200 with	Marks	Learning Outcom	e (s) DoK
6 (a)	depth of below th	f surface of water. If centre of pressure the free surface.	Determine the total when upper edge	al proceir	ro and the	6M	20CE305,1	L3
6 (b)	Explain	Simple Manometer	S.			6M	20CE305.1	L2
	The left	1		OR			2002000.1	22
7 (a)	below the atmosph that in the contains the press	leg of a U-tube me veying water, the let he center of pipe here. The level of me left leg and the Benzene (Specific sure in the pipe?	line, and the right lercury in the right lercury in the right space above merogravity 0.87) to a h	the leg book the leg is 0.6 cury in the legal to 10 cu	eing 0.8 m s open to 5 m above e right leg 0.4 m. Find	6M	20CE305.1	L3
7 (b)	Suride S	an equation for ce submerged in a liqu	IQ.			6M	20CE305.1	L2
8 (a)	u = y ³ /3 and veloc	city components in essible fluid are as $f +2x - x^2y$; $v = xy$ city potential function	rollows, r ² – 2y –x³ /3. Obła on.	ain Strear	m function	6M	20CE305.2	L3
8 (b)	motel t	the Principle inv		OB		6M	20CE305.2	L2
9 (a)	Containanty	e equation of Con equation for 3-D flo	OW.	an expr	ession for	6M	20CE305.2	L3
9 (b)	Explain va	arious types of fluid	flows.			6M	20CE305.2	
10 (a)	Eveleie et					0.111	2002300.2	L2
10 (a)	Capita De	bout pipes in paralle	el connection.			6M	20CE305,3	L2
10 (0)	Delive Da	rcy-Weisbach equa				6M	20CE305.3	L2
11 (a)	Explain br	iefly about different	hinon of t	OR				***
	Derive the	iefly about different expression for the	nypes or losses in	pipe flow		6M	20CE305.3	L2
11 (b)	fluid between	een the parallel plat	es.	ion for th	e flow of	6M	20CE305.3	L2
12 (a) 12 (b)	What are t Explain go	he performance ch eometric similarity	aracteristics of a tu	rbine?		6M 6M	20CE305.4 20CE305.4	L2 L2

13	OR Explain in detail about Francis turbine with a neat diagram.	12M	20CE305.4	L2
14	Explain the characteristics of Laminar and Turbulent boundary layer over a thin flat plate with a neat figure. OR	12M	20CE305.5	L2
15 (a)	Discuss characteristics of laminar and turbulent boundary layer.	6M	20CE305.5	L2
15 (b)	Write about the development of lift in immersed bodies.	6M	20CE305.5	L2

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Dept.: Civil Engg. CSE EC	E EEE ME BS&H			
Name of the Reviewer : Somester : Use Title : D	RANT KUMAR 11TA) 21-22 Igital syxtem 1		A : A	sst. Prof
mastery or the reamers	g relevant to the assessment on that course of study?			nderstand the
Yes i No. If yes, please	rate it on a five-point scale		(5: High to 1: Low)	
	very clear in easily understar			mbiguity?
	rate it on a five-point scale			
 Are the questions bein question response time 	g crisp and concise and omit?	s irrelevant infor	mation that reduces	the students'
Yes No. If yes, please	rate it on a five-point scale	1 (5: High to 1: Low)	
4. Do you observe any of	the questions that has less sco	ope to assess the	intended knowledge	e and skill?
Yes No. If yes, please	rate it on a five-point scale	1 (5: High to 1: Low)	
Are the questions being	g addressing appropriate cogo nking and problem-solving ski	nitive levels of R	levised Bloom's Tax	опоту (RBT)
Yes No. If yes, please	rate it on a five-point scale	(5: High to 1: Low)	
6. Are the questions being	single dimensional avoiding n	nultiple ideas to e	evaluate one respons	se at a time?
Yes No. If yes, please	rate it on a five-point scale	(5: High to 1: Low)	
7. In general, how do you	ate the quality and standard o	f questions?	t	200

Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

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Dept.: I	ot.: Dept.: Civil Engg. CSE CSE (AI & ML) CSE (DS) ECE EEE ME BS &H						
Organi: Acader Semes	of the Reviewer : Suryanarayana Chippada Designation:Sr. Analog Layout Engineer :Insemi technology services pvt. Ltd. nic Year : 2021-22 ter : III SEM Title : Digital System Design						
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?						
	Yes No. If yes, please rate it on a five-point scale5(5; High to 1: Low)						
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity?						
	Yes No. If yes, please rate it on a five-point scale5 (5: High to 1: Low)						
3.	Are the questions being crisp and concise and omits irrelevant information that reduces the students question response time?						
	Yes No. If yes, please rate it on a five-point scale5 (5: High to 1: Low)						
4.	Do you observe any of the questions that has less scope to assess the intended knowledge and skill?						
	Yes No. If yes, please rate it on a five-point scale5(5: High to 1: Low)						
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?						
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	Yes No. If yes, please rate it on a five-point scale5(5: High to 1: Low)						

7. In general, how do you rate the quality and standard of questions?

Commendable Excellent Good Satisfactory

8. General Remarks

Signature CH suryanarayana

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Dept.: Dept.: Civil Engg.	CSE CSE (AI & ML) CSE (D	S) ECE EEE	ME BS &H
Name of the Reviewer Organization Academic Year Semester Curse Title	: Suryanarayana Chippada Insemi technology services pvt.	Designation Ltd.	:Sr. Analog Layout Engineer
Are the questions mastery of the learning mastery of the learning mastery.	being relevant to the assessment arners on that course of study?	of Course Outco	mes as well as to understand the
Yes No. If yes, p	lease rate it on a five-point scale	_5	(5: High to 1: Low)
2. Are the questions	being very clear in easily understan	dable language	without any sort of ambiguity?
Yes No. If yes, p	lease rate it on a five-point scale	_5	(5: High to 1: Low)
Are the questions question response	being crisp and concise and omit time?	s irrelevant infon	mation that reduces the students
Yes No. If yes, p.	lease rate it on a five-point scale	_5	(5: High to 1: Low)
4. Do you observe a	ny of the questions that has less sco	pe to assess the	intended knowledge and skill?
Yes No. if yes, pl	lease rate it on a five-point scale	5	(5: High to 1: Low)
5. Are the questions that facilitates criti-	being addressing appropriate cog cal thinking and problem-solving ski	nitive levels of R	evised Bloom's Taxonomy (RBT
Yes No. If yes, pl	ease rate it on a five-point scale	5	(5: High to 1: Low)
6. Are the questions	being single dimensional avoiding n	nultiple ideas to e	evaluate one response at a time?
Yes No. If yes, pl	ease rate it on a five-point scale	5	(5: High to 1: Low)

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-	To incurcate etitical statiolards and moral values.
Dept.:	Civil Engg. CSE ECE EEE ME BS &H
Organi	
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7.	In general, how do you rate the quality and standard of questions? -> 5
AC 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

Degree

8 (b)

9 (a)

9 (b)

10 (a)

10 (b)

11 (a)

11 (b)

logic gates

with a PLA:

B. Tech. (U. G.)

 $F(A,B,C,D) = \sum m(0,2,4,5,6,7,8,10,13,15)$

(i) $F(A,B,C,D) = \pi(0,1,2,3,4,10,11)$

(ii) $F(A,B,C,D) = \pi(1,3,5,7,13,15)$

A'B'+AC+BC'+B'C+AB

Solve the given expression using consensus theorem

F(W,X,Y,Z)= M(1,2,4,7,12,14,15) using K-maps

Obtain the simplified expression in product of sums.

Obtain the simplified expression in POS (product of sums) of

Organize the procedure for multiplexers and de-multiplexers

and draw the logic diagram of a 4-to-1 line multiplexer with

Construct the functions and applications of PLAs in memory

addressing and implement the following two Boolean functions

F1 (A, B, C) = Σ (0, 1, 3, 5) and F2 (A, B, C) = Σ (1, 2, 4, 7)

Model a circuit for 2-bit magnitude comparator using gates

Design odd parity generator for 3-bit using a decoder

Program

Academic Year

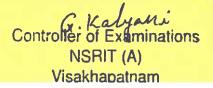
Semester End Examination, February, 2022

ECE

	Course Course	Code	20EC305 Digital System I	Test Duration Design	3 Hrs.	Max, M	larks 7	O Semester	2021 - 2022 III
F	Part A (Short A	nswer Questions	5 x 2 = 10 Marks)					
	No.	Questio	ons (1 through 5)					Learning Outcome	DoK
P	4 5	Define What a State the Draw V	re PLAs and PALs ne function table of 'HDL design flow	et in K-Maps and giv ? T-Flip-Flop 5 x 12 = 60 Marks)	e example	es		(s) 20EC305.1 20EC305.2 20EC305.3 20EC305.4 20EC305.5	L1 L1 L1 L1 L1
		Questio	ons (6 through 15)				Marks	Learning Outcome (s	s) DoK
	(4)	i) (53.6	t the following (25) _{to} to (?) ₂ ii) (3	FD) ₁₆ to (?) ₂ iii) (A69.8) ₁₆ t	o (?) _{in}	6M	20EC305.1	L2
b	i (b)	Show t	hat the dual of the	exclusive OR is als	o its comp	liment	6M	20EC305.1	L2
7	(a) (quivale Wha	ent binary at are 2's compl	nary 1010011 into g ay code 101011 into ement and 9's co	ray code o its	t of a	6M	20EC305.1	L2
7	(b) (ii) Subi 101) ₂ - (tract the followin	g using 1's and	2's comp	lement	6M	20EC305.1	L2
8	(a)	allable	olify the following Karnaugh map musing NAND gates	Boolean function ethod and implement	, using ent the sin	a four oplified	6M	20EC305.2	L2

OR

AC 15. 00. 2021 Question Paper for End Semester Examination | Academic Regulation 2020



6M

6M

6M

6M

6M

6M

6M

20EC305.2

20EC305.2

20EC305.2

20EC305.3

20EC305.3

20EC305.3

20EC305.3

L2

L2

L2

L3

L3

L3

L3

12 (a)	Explain the working of JK Flip Flop	6M	20EC305.4	L2
12 (b)	Demonstrate the conversion of an SR Flip-Flop into D Flip-Flop	6M	20EC305.4	L2
	OR			
13 (a)	Relate and explain Johnson counter	6M	20EC305.4	L2
13 (b)	Illustrate the shift Right and Left with examples	6M	20EC305.4	L2
	Inference the VHDL code for the following			
14 (=)	(i) 3 bit up Counter	014	00500055	
14 (a)	(ii) Contrast the architecture body? Write the syntax for	6M	20EC305.5	L4
	architecture body			
14 (b)	Analyze overloading? Explain overloading in VHDL with	C14	2000205 5	1.4
14 (0)	suitable example	6M	20EC305.5	L4
	OR			
15 (a)	Discover the dataflow design style of VHDL programming with	CM	DOLCOUR E	1.4
10 (a)	so table example	6M	20EC305.5	L4
15 (b)	detail about various data types and operators	CM	2050205 5	L4
10 (0)	ed in VHDL	6M	20EC305.5	L4

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NSRIT (A)

Visakhana

Visakhapatnam

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Dept.:	Civil Engg. CSE ECE EEE ME BS &H	
Organi	- 1	
1.	mastery of the learners on that course of shall?	
	Yes No. If yes, please rate it on a five-point scale	4
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity	?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)	
3.	Are the questions being crisp and concise and omits irrelevant information that reduces the student question response time?	ients'
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)	
4.	Do you observe any of the questions that has less scope to assess the intended knowledge and ski	ill?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)	
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (hat facilitates critical thinking and problem-solving skills?	RBT)
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)	
6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a tir	me?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)	
7.	In general, how do you rate the quality and standard of questions?	
AG 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh	

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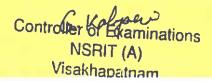
- To develop the students into outstanding professionals through innovative Teaching-Learning process.
- To uphold research through long term Academia-Industry interaction.
- To inculcate ethical standards and moral values.

Dept.: Civil Engg. CSE ECE EEE ME BS &H
Name of the Reviewer : De C. Rameh Designation : Profession Organization : LIET Academic Year : 2022 Semester : III Curse Title : Complex Variables, 4 Transfers, Maltiembale too Co
 Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
Yes No. If yes, please rate it on a five-point scale
2. Are the questions being very clear in easily understandable language without any sort of ambiguity?
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7. In general, how do you rate the quality and standard of questions?
AC 23 Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh
Drk. Rameh



Semester End Examination, January/February, 2022

Degree		B. Tech. (U. G.)	Program	ECE			Academic Year	2021	- 2022
Course	Code	20BSX14	Test Duration	3 Hrs.	Max. Marks	70	Semester	E-1 4-14-1	III
Course		Complex Variable	& Transforms		Secretarian de la constanta de				
	(B)			- 111			AV2_		
No No		swers Questions	X 2 =10 Marks)						
1		ons (1 through 5) that u, v are harmor	vio functions if f/=\		-hatla famatian		Learning Outcome(s)	DoK
2	Define	Residue of a comp	lex functions if i(2)	-u+iv is an	alytic function.		20BSX14.1		L1
3		n of the Fourier seri		function			20BSX14.2 20BSX14.3		L1 L3
		$= \sin x , -\pi < 1$. 101100011			2000/14.0		Lo
4		-					9-4-		
4		(C0323t					20BSX14.4		L2
_	Find L	{ }							
5					e -ux		20BSX14.5		L2
	Expres	s as Fourier sine ar	nd cosine transform	n of f(x)	·V				
	Long An	swers Questions 5	X 12 =60 Marks)	3000					
No	Questi	ons (1 through 5)				Marks	Learning Outcome	(s)	DoK
6(a)				sin	2x	6M	20BSX14.1		L3
	Find th	e analytic function,	whose real part is	cosh 2 _v	$-\cos 2x$				
	4								
6(b)		2+1 1/2 1 1 1 1				6M	20BSX14.1		L2
	F	$\int_{0}^{\infty} (2x+1+iv)$) <i>d</i> 2						
	Evalua		along the	straight line	joining (1,				
7	i) allu	(2, 1)		OR					
7(a)		(3			- 5	6M	20BSX14.1		L2
		$\frac{xy}{}$	$\frac{(x+iy)}{2}, z \neq 0$			OW	2000X14.1		44
		$f(z) = \begin{cases} x \end{cases}$	$\frac{(x+iy)}{x^2+y^4}, z \neq 0$ $0, z = 0$						
	Prove	that	0, z = 0	is not anal	ytic at				
200.00	z = 0, a	although CR equation	ns are satisfied at						
7(b)				rs2 -s+	Ι,	6M	20BSX14.1	20.0	L3
	Heine	Cauchy's Integral fo	maula avaluata (= -=+ =-1	<i>−ci</i> =,				
	oung.		iniula, evaluate						
	where	$ z = \frac{1}{2}$.							
8(a)	where	CIS 2				C1.4			10.531
O(a)			$f(z) = \frac{2z^3 + 1}{z^2 + 1}$	<u>+ 1</u>		6M	20BSX14.2		L2
		the Taylor's series	of = +	∠ valid at	out the				
0417	point 2								
8(b)		$\int \frac{z-3}{z^2+2z+5} dz$	<u>'-</u> .			6M	20BSX14.2		L3
	Evalua	$te^{\frac{1}{2}z^2} + 2z + 5$	where C is	+ + i =	2.				
				OR					
9(a)	Explain	various types of sir	igular points and f	ind the natu	ire of	6M	20BSX14.2		L2
	sinoula	rity of the function	$f(z) = \sin \frac{1}{1-z}$						
		and the terresteri		100					



9(b)	(dz	6M	20BSX14.2	L3	
	By Cauchy's residue theorem, evaluate $\int_C \frac{dz}{(z^2+4)^2}$, where C is				
	z-i =2.			12	
10(a)	Find cosine series for $f(x) = (\pi - x)^2$ in $[0, \pi]$.	6M	20BSX14.3	1.3	
10(b)	Find the Fourier series expansion for f(x).	6M	20BSX14.3	L3	
	$f(x) = \begin{cases} 2, & \text{if } -2 \le x \le 0 \\ x, & \text{if } 0 < x < 2 \end{cases}$				
	or OR				
11(a)	/ 10 < y < T	6M	20BSX14.3	L3	
	{ 1,0 < x < ズ 26, 木 < x < え木 Expand f(x) = as Fourier series				
11(b)	Find half range sine series for $f(x) = x + x^2 \ln[0,1]$.	6M	20BSX14.3	L3	
12	ring Hall targe sale series to	12M	20BSX14.4	L2	1
	(,)				(
	Find (i) 4 12+11 (ii) 2 & Sint+ cost }				
13(a)	OR	6M	20BSX14.4	L3	
(-)	$f(t) = \begin{cases} 1,0 < t < 1 \\ -1,1 \le t < 2 \end{cases}$ is a periodic function with period				
	2. Then find its Laplace transform.		-		
13(b)	Solve +"+y = sin3t, y(0) = y'(0) = 0	6M	20BSX14.4	L3	
14(a)		6M	20BSX14.5	L3	
14(a)	Find the Fourier sine and cosine transform of $f'(x) = \frac{e^{-2x}}{x}$ and				
	$\int_{0}^{\infty} \frac{e^{-2x} - e^{-3x}}{x} \sin sx = \tan^{-1} \left(\frac{s}{2}\right) - \tan^{-1} \left(\frac{s}{3}\right)$ deduce that $\frac{s}{2}$				
14(b)		6M	20BSX14.5	L3	
	Find the Fourier transform of $f(x) = \begin{cases} a^2 - x^2, & \text{if } x < a \\ 0, & \text{if } x > a \end{cases}$				
	$\int_{0}^{\pi} \frac{\sin x - x \cos x}{x^3} dx = \frac{\pi}{4}$ Hence Show that 0				
	OR	6M	20BSX14.5	L3	
15(a)	Using Fourier integral show that $(\pi/2) if 0 < r < \pi$	OW	2000/14:0		
	$\iint_{\Omega} \frac{1 - \cos \pi \lambda}{\lambda} \sin x \lambda d\lambda = \begin{cases} \pi / 2, & \text{if } 0 < x < \pi \\ 0, & \text{if } x > \pi \end{cases}$				
15(b)	sinap	6M	20BSX14.5	L3	
	Find the inverse Fourier cosine transform of \(\textstyle{l}' \)				

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AC/23	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

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Dept.:	Civil Engg. CSE ECE EEE ME BS &H
Organ Acade	of the Reviewer: P. Bharathi Designation: Asst. Pro-
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4(0)23	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

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(4/T)	14	1

	Degree	B. Tech. (U. G.)	Semester End	Examination, Febru	ary, 2022		TIP	114
	ourse Code	20CS305	grutt	USE, CSE (AI & ML)	& CS (DS)			
C	ourse	COMPUTER ORG	Test Duration	3 Hrs. Max. Ma	erks 70	Academic Year Semester	2021 -	202
1	The same of the same of the particular	OTER ORG	PANIZATION	and the second second second	The state of the s	gettlestel	1	1
P	art A (Short Ar	nswer Questions 5	v 2 = 40 Mant. >	The second secon	***************************************	The second of the second second second		
1				The second of the second	A STATE OF THE STA			
-	i Liud (1001101 - 10101004) using 2's comple	omen 10		Learning Outco		
-	2 List an	y three Memory refe	rence Instructions	sinent?	-	20CS305.	me (s)	D
1			ontrol memory?			20CS305.		
1	5 list and	TANGE OVEL HOW?		The second second		20CS305.		Ĺ
Par	rt B (Long Ans	y two advantages of wer Questions 5 x	Virtual memory			20CS305.4	4	Ĺ
١		ons (6 through 15)	12 = 60 Marks)			20CS305.5	5	L
1	Explain	no (o altough 15)			The state of	The second		
6	(a) subtract	i operations on ur	isigned binary n	umbers and perform	Mart	ks Learning Outcom	ne (s)	Do
100	COHIDII	11801 II 11010 1000	A 111	many numbers neina	7'0 71			-
6 (2 CICCUIt diagram at		i) 100-110000	2's 6M	20CS305.1	1	L2
1	explain i	ts working with its fu	a 4-bit binary coul	i) 100-110000 nter with parallel load	and			
1					OIVI	20CS305.1	1	L1
7 (a	a) Keprese	nt the decimal numb	ber 7453 in (i) BC	OR CD (ii) Excess-3 (iii) 24		1:	1	
7 (t	(IV) DINA!	y number	11 (1) 20	(ii) Excess-3 (iii) 24	21 6M			- bogo r
		ne fixed point repres	entation with an e	xample	100 March	20CS305.1		L2
8 (a	y Explain a	bout arithmetic mion			6M	20CS305.1	1	L2
8 (b				tail.	6M	200000==		
	memory-r	eference instruction:	and chous, DISW (F	e flow chart for	7	20CS305.2		L2
0.1	THE PERSON NAMED IN	The state of the	J.		6M	20CS305.2		L2
9 (a)	Explain at	out the 4-bit binary diagram of 4-bit a	adder cubing	OR		.1	1	
9 (b)	Draw the	diagram of 4-bit a	rithmetic circuit	vith neat sketches Explain the function of	6M	20CS305.2		
* **********	Cucnit Mith	the help of function	table.	explain the function (of 6M	The state of the s		L2
10 (a)	What are d	ifferent types of in-		The second second	OW	20CS305.2		L2
10 (b)	Explain abo	out the format is	ruction formats? E	xplain with examples.	8M	1"	· d	-
	1	out the format of mic	roinstruction.			20CS305.3		_2
11 (a)	Explain five	addressing mode		OR	4M	20CS305.3	- 1	2
11 (ъ)	Explain abo	addressing modes	with examples in	detail.	ELL	The same of the sa		
(0)		ut various compone d control unit.	nts in the organiza	ation of a micro	5M	20CS305.3	L	2
		The second secon			7M	20CS305.3	7	-0.00
2 (a)	What are the	steps involved in the	ne addition - s o				L	2
2 (b)	Explain with	an example	o addition of 2's	complement notation.	Cli	The second second second second second	of journey	***
-12/	ryhigin Root	h multiplication algo	rithm with an ever	nole	6M	20CS305.4	L	2
2 (0)	What is div	·		70	6M	20CS305.4	1	
3 (a)	mayrilluge ni	Minore with	plain about divis	ion of two cionad			L2	-
(b)		Chart for addition	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	100 man 2	6M	20CS305.4		
(0)	numbers. Also	S Hollings in Jave (nd subtraction of t	wo floating point		2000000,4	L2	
		The second secon	STATE OF THE PROPERTY OF THE P	1tation	6M	20CS305.4	1	
(a)	vynat is loca	life of		types of mapping			L2	
(b)	techniques use	ed in cache memory	biscuss about	types of mapping	70.0	9 ··· · · · · · · · · · · · · · · · · ·		
(D)	vinat is the diff	ference between iso	lated I/O and	10-14-10-10-10-10-10-10-10-10-10-10-10-10-10-	7M	20CS305.5	L2	
(a) (Evoleia -		and men	nory mapped I/O?	5M	20CS305.5		12
h) t	-vhisiu spont}	landshaking with a r	Of neat block diagram			2000000.0	L2	
b) E	explain about [Direct Memory Acces	S with pack to	l.	6M	20CS305.5		
		7 . 10003	mul fleat block	diagram.	6M	20CS305.5	L2	
						4000305.5	L2	

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Dept.:	Civil Engg. CSE	ECE EEE ME BS &H		
Organi	of the Reviewer ization mic Year	ANITS	Designation	n : Arrt proterror
Seme		2021-2022		
Curse	Title	DC Machines and Tr	anstorme	US,
1.	Are the questions mastery of the lea	being relevant to the assessment mers on that course of study?	of Course O	utcomes as well as to understand the
	Yes No. If yes, p	ease rate it ол a five-point scale _	5	(5: High to 1: Low)
2.	Are the questions	being very clear in easily understa	ndable langua	ge without any sort of ambiguity?
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	Yes No. If yes, pl	ease rate it on a five-point scale _	5	(5: High to 1: Low)
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5.	Are the questions that facilitates critic	being addressing appropriate cog al thinking and problem-solving sk	nitive levels o ills?	of Revised Bloom's Taxonomy (RBT)
	Yes No. If yes, plo	ease rate it on a five-point scale	5	_ (5: High to 1: Low)
6.	Are the questions t	eing single dimensional avoiding n	nultiple ideas	to evaluate one response at a time?
		ease rate it on a five-point scale		
7.	In general, how do	you rate the quality and standard o	of questions?	5
A(012)	Form No. AC 23.	00.2021 N S Raju Institute of Tec	hnology, Soni	iyam, Vizag, Andhra Pradesh

B. Satyanecayan

NSRIT

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Danna	84-miles	D.T. (1 0)	Semester End Ex		on, February,	2022		1000	44.79
Degre	e Code	B. Tech. (U. G.)	Program Test Duration	EEE 3 Hrs.	Max, Marks		Academic Year	2021 -	2022
Cours	all the same and	20EE304 DC MACHINES &	70	Semester	l				
			The state of the s						
No.	(Snort An	nswer Questions 5 ons (1 through 5)	x 2 = 10 Marks)						
1			f multiply excited ma	anatic fiel	id evetom		Learning Outco		DoK
2	Define I	the term commutation	on used in dc machi	ne	iu system		20EE304 20EE304		L1 L1
3	Differen	itiate 3-point starter	with 4-point starter				20EE304		L2
4	Define all day efficiency of a transformer List any four conditions to connect transformer in parallel						20EE304		L2
	(I ong An	swer Questions to c	connect transformer i	in parallel			20EE304	.5	L2
No.	Questio	ns (6 through 15)	x 12 - ou Marks)			Mode	Looming Oute		D-II
	Show th	nat the torque in a	doubly excited mag	netic syst	em is equal to	Mark	Learning Outco	ome (s)	DoK
6	me rate	or increase or the	field energy with res	spect to d	isplacement at	12M	20EE304	.1	L2
	constan	t currents							000
_	Derive t	the expression of the	ne flux, reluctance o	OR	alt (t t t t t t t				
7	with air	dab	ie ilux, reluctance d	or une mag	gnetic material	12M	20EE304	.1	L2
8 (a)	a do ger	an expression for th	e emf generated in	the armat	ture winding of	6M	20EE304	2	L2
			ure having 40 slots	with 12 co	onductore/ elot		***************************************	-	
8 (b)	generate	es 500 V. Determin	running if the	6M	20EE304	1	L3		
	flux per	pole is 50 mWb	0.11	2022007		LU			
	Evolain	democratizing 0		OR cross magnetizing effects of armature					
9 (a)	reaction	demagneuzing &	cross magnetizing	g effects	of armature	6M	20EE304	.2	L2
9 (b)		e internal and exten	nal characteristics of DC series generator in						
3 (D)	detail				o demonator III	6M	20EE304	2	L2
10 (a)	Discuss	the speed torque	characteristics of DC shunt, series and						
10 (a)	compour	nd motors with nece	ssary diagrams		12M	20EE304	3	L2	
				OR					
11 (a)	working	the role of starter	in DC Motor opera	ation. Als	o explain the	12M	20EE304	3	L2
10.11			r with neat diagram.			12141	2011004	.5	LZ
12 (a)	Derive th	e EMF equation of	transformer			6M	20EE304	4	1.2
	nrimary	age per turn of a si	ngle-phase transform	mer is 1.1	V. When the				
12 (b)	seconda	V voltage is found	ted to a 220 V, 50 to be 550 V. Find: i)	Primanus	Supply, the	6M	20EE304.	4	L3
	turns ii) (Core area if the may	kimum flux density is	1.1 Wb/n	n ²				
				OR					
13 (a)	Transform	od explain the equation	uivalent Circuit dia	gram of	single phase	6M	20EE304.	1	L3
13 (b)			ell type and core type	hannelow.	Mana				
ARL						6M	20EE304.	4	L2
14	brief each	various types of one of them	three phase transfo	omer cor	nections and	12M	20EE304.	5	1.2
	DITC! COCI	one of them		OR		12(1)	204,	J	42
	A 10 kV	/A, 500/250 V, 50	Hz single-phase	transform	ner dave the				
	IOIIOWING	lest							
15	12 A 100	Test (LV side): 25	0 V, 1.0 A, 80 W, SO	C Test (H	V side): 25 V,				
10	voltage si	de. Determine the	rs to the low voltage	and HV	refers to high	12M	20EE304.	5	L3
	(i) Equiva	lent circuit referred	to LV side. (ii) Sec	nndary Io	ad voltage at				
	0.8 p.f. la	gging with full-load	current	oridally lu	ed vollage at				

AC15.00, 2021: Question Paper for End Semester Evamination | Academic Regulation 2020

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	Civil Engg. CSE ECE EEE ME BS &H
	of the Reviewer: B. Satyana yayan Designation: ASSA Protessor ization: AN ITS ster: 2021-22 Title: III ECA
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AC 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

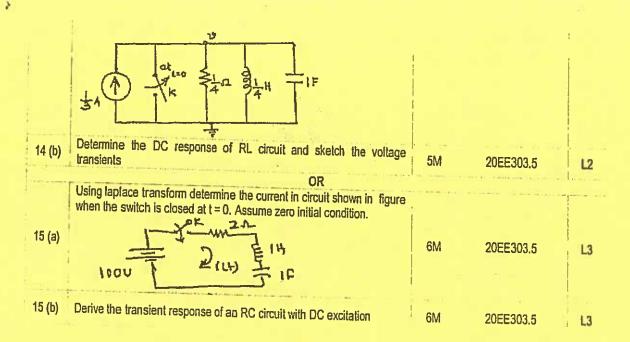
B. Sertyanelayor

NSRIT

				5	Semester E	nd Examina	ition, Februai	n, 2022		1.15 1.14	i
ř	Degre	Commence of the Commence of th	B. Tech.	(U. G.) F	rogram	EEE	adil i coludi		erroren er taktig		
	Cours	se Code	20EE303	or writing on engineers	Test Duratio		. Max. Mark			2021 - 2022	
	Cours	SE ELECTRICAL CIRCUIT ANALYSIS						(s 70 S	emester	181	
	Dort A	/Charles									
-	No.	Ouestic	ons (1 throu	stions 5 x 2	2 = 10 Marks	5)					
		An Fled	citic iron le Citic iron le	ign o) rated 1000v	W 040V E	1.11	288		Learning Outcom	e (s) Dok	(
* 1.4	1	heating	element.	rered 1000A	v, 240v. FIN	d the curren	drawn & resis	tance of the	20EE303.1	30	
+	2	What is	the imped	ance of (2+j	5)Ω.	etinen ministra	****	4 2.	and the same of the same of	L3	
	3	State R	eciprocity 1	Theorem	Marie San				20EE303.2	LI.	
	5	Whatis	the relation	nship betwe	en Z-param	eters and Y-	parameters?		20EE303.3 20EE303.4	L1	
1		AALIICE III	ie siliusuka:	ai response	of (a) DC Ali	multi /let Dit	rcuit.	The street	20EE303.5	L2 L1	
	No.	frond Wit	ns (6 throu	itions 5 x 1:	2 = 60 Mark	s)	1		2022000,0		
	6 (a)	Discuss	the Kirchh	gn 15)			91.70 DEMAND	Marks	Learning Outcome	e (s) DoK	(
	0 (4)	Datami	nie Wicilli	off's Laws w	vith an exam	ple		6M	20EE303.1	L2	
ř		analysis	ine me vo	itages 1 ai	nd 2 of the	e network in	Fig. by nod	lal			
		- Tranjula		40				-		1	
			3	1Q R1 1	20 R						
				Λ <i></i> >-	^	4 2					
	6 (b)	11		R2	V V V	R3	12			- 91	
		1A/	4	2Ω≤		10	2A A	6M	20EE303.1	L3	
			1)	≥		>			N		
							T				
		1					8				
				0							
	10.5	Evelete				OR				- 4	
7	' (a)	technique cxprain	e with an e	lance parar	meter series	s and paral	lel combinatio	n _ cu	TO MAKE		
			~ ***iu:	ACHINA			n in figure wit	DIVI	20EE303.1	L2	
		network t	topology.	11 075 16363	PROFILIDI FILE	circuit snow	n in figure wit	th ,	T WE WELL	The state of	
						20 v					
					3Ω R1						
		٠ ٦		—- ₇ —-/-	_>_						
		Ţ		'	10						
7	(b)	10A A)	R2 20 <	R5	_ {	R3 2Ω <	Chi		1	
		4		²¹¹ >	1Ω≶	>	. 5	6M	20EE303.1	L3	
)	1		R4 5Ω			1	
						10 V (+					
						· · · · · · · · · · · · · · · · · · ·	-)				
		L		ļ							
		A sories F	n o								
11	a)	Determine	RLU circuit	is supplied	with a volta	ge source o	f 230 V, 50Hz	9.5		100	
*		C≃50µF.	CHOUNT CL	ment and	power facto	or if $R=40\Omega$	r 230 V, 50Hz , L=0.2H and	i 6M	20EE303.2	L3	
(b)	Draw the p	phasor rela	tion for serie	es RI C eire	rit					
						OD.		6M	20EE303.2	L2	
		A resistor	of 150Ω ,	inductance (of 200mH a	nd	ance of 10µF				
9											
		. ene iinig (IN MINERAL	ice illi mille	Of Housea th	rough the at-	cuit (iii) power	6M	20EE303.2	L3	
		100101 (IV) V	voltage acri	oss R,L &C	(v) power in	walts					
-	-										

ACTO NO. 2029. Question Paper for the Sentester Bendinetion | Agencial Regulating 2020.

9 (b)	A TW AC circuit contain 10 Ω resistance and 30 Ω inductive restricted in series. What is average power of this circuit?	6M	20EE303.2	L3	
	In the circuit shown in Fig., obtain the condition from maximum power trainer to the load RL. Hence determine the maximum power trainered.				
10 (a)	1θΩ \$ 10Ω \$ 2Ω \$ RL \$	7M	20EE303.3	L3	
10 (b)	Stall and Explain the superposition theorem.	5M	20EE303.3	L2	
	Fin Devenin's equivalent for the fo'llowing circuit.				0
11:(a)	$E = \pm 9 \text{ V} \qquad R_2 \lessapprox 6 \Omega \qquad \lessapprox R_I$	7M	20EE303.3	L3	
	b b				
11 (b)	State and explain milliman's theorem	5M	20EE303.3	L3	
12 (a)	Determine Y parameters of the following network $\begin{array}{ccc} (1/3) \ \Omega & (1/3) \ \Omega \\ \hline > & & & & \\ & & & & \\ & & & & \\ & & & &$	7M	20EE303.4	L3	
12 (b)	L plain about Y-parameters of a two-port network OR	7M	20EE303.4	L2	
	Colermine the Z parameters of the following two port network.: 1 Ω 1 Ω 2 Ω 2 Ω				
13 (a)		6M	20EE303.4	L3	
13 (b)	Dolve Z parameters in terms of Y and h parameters	6M	20EE303.4	L2	
14 (a)	Figure shows RLC parallel circuit excited by a dc current source. At t=0 the switch is opened find v(t)	7M	20EE303.5	L3	
7				epril in	



NSRIT

Semester End Examination, January/February, 2022

Degree Course Code Course	B. Tech. (U.G.) 20CE304		Civil Engineering 3 Hrs. Max. Marks th of Materials	70	Academic Year Semester	2021 - 2022 III
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Part A (Short Answei	Questions	5 x 2 = 10 Marks)
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No.	Questions (1 through 5)	1	
1	What is the use of Mohr's circle?	Learning Outcome (s)	DoK
2	Write the equation for the simple bending theory	20CE304.1	L1
	Calculate the maximum deflection of a simple periodic	20CE304.2	L1
3	Calculate the maximum deflection of a simply supported beam carrying a point load of 85 KN at mid span. Span = 5 m, E= 21000 kN/m ²	20CE304.3	L1
4	Define (i) Slenderness ratio (ii) Radius of Gyration	2005204.4	1.4
5	Distinguish between Circumferential stress (or hoop stress) and Longitudinal	20CE304.4	L1
3	stress (or most stress) and conglitionial	20CE304.5	L1

Part B (Long Answer Questions 5 x 12 = 60 Marks)

No. Questions (6 through 15)

Marks Learning Outcome (s) DoK

The bar shown in Fig. 1 is tested in universal testing machine. It is observed that at a load of 40 kN the total extension of the bar is 0.280 mm. Determine the Young's modulus of the material.

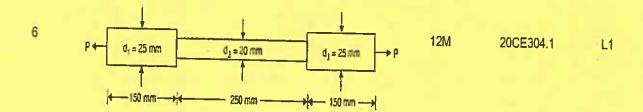


Figure.1

OR

A specimen of steel 20 mm diameter with a gauge length of 200 mm is tested to destruction. It has an extension of 0.25 mm under a load of 80 kN and the load at elastic limit is 102 kN. The maximum load is 130 kN. The total extension at fracture is 56 mm and diameter at neck is 15 mm. Find

12M

L2

(i) The stress at elastic limit

(ii) Young's modulus

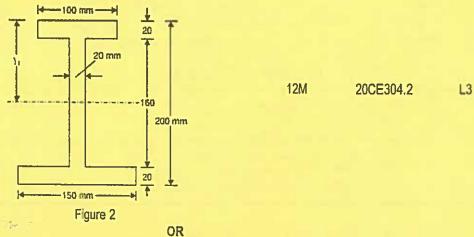
(iii) Percentage elongation

(iv) Percentage reduction in area

(v) Ultimate tensile stress

20CE304.1

The unsymmetric I-section as shown in Figure. 2 is the cross-section of a beam, which is subjected to a shear force of 60 kN. Draw the shear stress variation diagram across the depth



A circular steel pipe of external diameter 60 mm and thickness 8 mm is used as a simply supported beam over an effective span of 2 m. If permissible stress in steel is 150 N/mm², determine the maximum concentrated load that can be carried by it at mid span as shown in Figure. 3

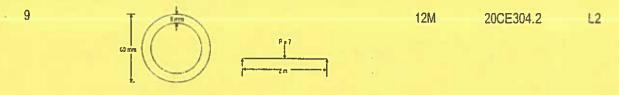


	Figure 3			
10	A simply supported beam span 14m, carrying concentrated loads of 12KN and 8KN at two points 3mts and 4.5m from the two ends respectively. Moment of Inertia I for the beam is 160x10 ³ mm ⁴ and E = 210KN/mm ² . Calculate deflection of the beam at points under the two loads by moment area method OR	12M	20CE304.3	L2
11	A beam AB of 8 m span is simply supported at the ends. It carries a point load of 10 kN at a distance of 1 m from the end A and a concentrated load of 15 kN at a distance of 2 m from the end B. If $I = 10 \times 10^6$ m ⁴ , Using Macaulay's Method, Determine: (a) Deflection at the mid-span, (b) Slope at the end A.	12M	20CE304.3	L2
12	A simply supported beam of length 6m is subjected to uniformly distributed load of 80 kN/m over the whole span and deflects 25 mm at the centre. Determine the crippling loads when the beam is used as column with the following conditions. 1. Both the ends fixed II. Both the ends pin jointed OR	12M	20CE304.4	L3
13	A hollow cylindrical cast iron column is 3 m long with both ends fixed. Determine the minimum diameter of the column if it has to carry a safe load of 150 kN with a factor of safety. Take the internal diameter as 0.6 times the external diameter	12M	20CE304.4	L3

Take σ_c =450 N/mm² and α = $\frac{1}{1700}$ in Rankine's formula

14	A hollow shaft is to transmit 200 kW at 80 r.p.m. If the shear stress is not to exceed 60 MPa and internal diameter is 0.6 of the external diameter, find the diameters of the shaft.	12M	20CE304.5	L2
	OR			
15	A thin cylindrical shell is 3m long and 1m in internal diameter. It is subjected to internal pressure of 1.2 MPa. If the thickness of the sheet is 12mm, find the circumferential stress, longitudinal stress, changes in diameter, length and volume. Take E=200 GPa and μ =	12M	20CE304.5	L2

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- To inculcate ethical standards and moral values.

Dept.:	Civil Engg. CSE ECE EEE ME BS &H
Organi Acadei Semes Curse	
	Yes No. If yes, please rate it on a five-point scale
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale 5 (5: High to 1: Low)
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4.	Do you observe any of the questions that has less scope to assess the intended knowledge and skill?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?
	Yes No. If yes, please rate it on a five-point scale
6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale4(5: High to 1: Low)
7.	In general, how do you rate the quality and standard of questions?
AC 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

NSRIT

			Semester End E	xamination, February,			
Degree		B. Tech. (U. G.)	Program	ME	Ac	ademic Year 2021	- 2022
Course	Code	20ME303	Test Duration	3 Hrs. Max. Marks	70 Se	mester	111
	0000	Mechanics of So					
Course		Mechanics of 30	ilina				
Part A (S	hort An	swer Questions 5 x	2 = 10 Marks)				5.4
No.		ns (1 through 5)				Learning Outcome (s)	
1	Define	Poisson's ratio.				20ME303.1	Ц
2	Write th	e relationship betwe	en Shear force and I	Bending moment.		20ME303.2	L1
3	MI=f/v=	E/R – justify.				20ME303.3	L2 L2
4			iding out the slope a	nd deflection at a section?		20ME303.4	L1
5		hin cylinder.				20ME303.5	I, I
Part B (L		swer Questions 5 x	12 = 60 Marks)		Mada	Leaming Outcome (s)	DoK
No.	Questic	ns (6 through 15)			Marks	Learning Outcome (s)	Dork
	The str	esses on two perper	idicular planes throu	gh a point in a body are 90			11
6 (a)	MPa (rensile) and 70 MH	'a (Compression). 1	Determine the normal and	6M	20ME303.1	L2
U (U)				50 with the vertical. Draw			
	conngu	ration and Mohr's cir	CIE.	in aubicated to load of 50	,		
0 (%)	A Steel	rod of length 5 m a	Janeth change in	r is subjected to load of 50 diameter and change in	6M	20ME303.1	L2
6 (b)	KN. De	. Take E = 2x10 ⁵ N/i	nerigin, unange in	in=0.25		20111200011	
	VOIUME	. Take E = 2x10°19/1	titti- attu poisons rai	OR			
	A sino	and of length 60 o	m and tun conner	rods of length 30 cm each	1		
	A Stee	rough of length ou c	TEU FVI CAS area of	steel rod is 2800 mm ² and	4		
7 (a)	each o	onner rod is 1200 n	m2 Solve the stres	ses in the rods. Take Es	6M	20ME303.1	L2
	2v1051	N/mm ² and Ec = 1x1	nn-, ochra ale saec ns N/mm²	1300 III 010 1000, 12110 =0			
7 (b)				inless steel and explain.	6M	20ME303.1	L2
, (n)	DIAWE	I HEBE SEESS SEEMING	arte diagram or one				
					,		
	A cant	ilever beam 2 m lon	g fixed at A is carry	ng point load of 10 kN at E	d 12M	20ME303.2	L2
8	C and	D each and at a dis	tance of 0.5 m, 1.0	m, and 1.5 m from the fixe	u 12111	201112000.2	
	ena. C	alculate the Shear to	irce and bending mi	ment at salient points.			
				OR			
	A bea	m of length 7 m is :	simply supported at	its ends. It is loaded with	a	001420000	1.0
9 (a)				out and 20 kN concentrate	d 7M	20ME303.2	L2
		cting at centre. Draw					
9 (b)				ent diagrams for a simp	iy 5M	20ME303.2	L2
J (J)	suppo	rted beam of length	L carrying a point loa	ad W at its middle point.			
40.43			1 d 2 . db . db	. It simple bondies	6M	20ME303.3	1.2
10 (a)		s the assumptions i			6M	20ME303.3	L2
10 (b)	Derive	the section modulu	s of rectangular and		OIVI	201VIE303.3	LZ
		100		OR	4014	00ME303 3	L3
11	Derive	the bending equation	on.		12M	20ME303.3	LS
12 (a)				ever beam with a point lo	ad 6M	20ME303.4	L2
(0)		at free end by doub					
	A bea	m of length 7m is	simply supported at	its ends. It is loaded with	a cu	2014年2027	L2
12 (b)				nout and 20 kN concentrat		20ME303.4	LZ
	load a	icting at centre. Find	the central deflection	n by moment area method	•		
40	D. 1	0. 7	- ftlan ala-fia	OR	12M	20ME303.4	L2
13	Deriv	e the torsion equatio	n for circular shafts.		1210	201015303.4	LZ
	Date	-las than the -t	dimensions of -	this adjudge due to inter	nol		
14 (a)		_	ulmensions of a	thin cylinder due to inten	sai 6M	20ME303.5	L3
	press		dist and leasth diss	clean	6M	20ME303.5	L2
14 (b)	Expla	in about circumferer	war and longitudinal		OW	ZUME303.3	LZ
45	Dad	s Fulada adaulias fa		OR	12M	20ME303.5	L2
15	Deur	e Euler's crippling fo	imula for columns.		I ZIV	ZUME303.3	LZ

G. Icalyani
Controller of Examinations
NSRIT (A)
Visakhapatnam

Preamble: This feedback form AC 23 is intended to receive feedback on the quality of questions to ensure that the intended learning outcomes in terms Knowledge, Understanding and Skill are assessed. Also this form helps us to improve the quality of the questions that appear in the assessment instrument.

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Dept.: Civil Enga, I CSE I ECF I FFF I MF I BS &H

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Organi	· Wi	, Pro L
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to under mastery of the learners on that course of study?	rstand the
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)	
2.	Are the questions being very clear in easily understandable language without any sort of ambig	guity?
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	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)	
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5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonom that facilitates critical thinking and problem-solving skills?	my (RBT)
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6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response a	t a time?
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7.	In general, how do you rate the quality and standard of questions?	
AC 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Prades	sh

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NSRIT

Semester End Examination, February, 2022

Degree	B. Tech. (U. G.)	Program	ECE	onj t oblacij,		The second
Course Code	20EC303	Test Duration	3 Hrs.	Max. Marks	Academic Year	2021 - 2022
Course Signals and Systems		01113.	IVIAX. IVIAIKS	70 Semester		
Part & (Short /	news Owelland	A 4			eren eren eren eren eren eren eren eren	

Part A	(Short Answer Questions 5 x 2 = 10 Marks)		energe (energy) in an inches energy (energy) in the consequence of the	
NO.	Questions (1 through 5)		Learning Outcome (s)	DoK
1	Give the Mathematical equation of impulse signal and plot its way	eform	20EC303.1	-
2	otate Dirichlet's Conditions	-5-11-1-11	20EC303.2	Li
3	Give two properties of Convolution operation		20EC303.3	
4	List any two filter characteristics of linear systems		20EC303.4	L1
5	Define ROC of the laplace fransform	te to a second	20EC303.5	L1 L3
Pan B	(Long Answer Questions 5 x 12 = 60 Marks)		2020000.0	LJ
1				
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK
6 (a)	What are Continuous and Discrete Signals? Give examples	6M	20EC303.1	L1
6 (b)	What is System? Classify the System with suitable examples	6M	20EC303.1	Li -
	OR	0.11	2010300.1	LI
7	Derive the Response for Impulse and Step response of a	1120	The same of the same	
100000	- Cystelli	12M	20EC303.1	L1
8(a)	Derive an expression for mean square error using the	6M	20EC303,2	L3
1 3000	Copiession of a fulfillial listing authorities signal cases		200,0000,2	LO
8 (b)	Find the Founer transform of a Full wave motified extent when	6M	20EC303.2	L3
1	fundamental period is π	OII,	202000.2	LJ
	OR OR			
9 (a)	State and prove any three properties of Fourier Transform	-	20EC303.2	
		6M		L2
0.75	Find the Fourier Transform of the following signals.			-
9 (b)	a) δ[t] b) U(t) c) e ^{-at}	6M	20EC303.2	L3
10 (0)				10
10 (a)	Perform the convolution of the two sequences x[n]={1 2 3 4}	ed moreout		
10 (1)	and n(n) = { - , - }	4M	20EC303.3	L3
10 (b)	Explain and define Auto correlation function, write its properties			
l h = i	and prove any two of them	8M	20EC303.3	L4
44.43	OR			
11 (a)	State and prove Parseval's theorem for energy / power signals	8M	20EC303.3	1.4
11 (b)	Perform the convolution of $h(t)=e^{-2t}u(t)$ and $x(t)=e^{-3t}u(t)$	4M	20EC303.3	L4
	The real arms and the second s	नाश	20EC303.3	L3
12	Derive the Relationship between Bandwidth and Rise time	12M	0050000	
	OR	I ZIVI	20EC303.4	L2
13 (a)	State and Prove sampling Theorem	CN		
13 (b)	Explain distortionless transmission through a system	6M	20EC303.4	L2
Options:	a system	6M	20EC303.4	L2
14 (a)	Obtain the Z-transform of $x(n) = -n^2u(-n-1)$			
14 (b)	State and prove Linearity and time Shifting properties of z-	6M	20EC303.5	L4
. ,	transform	6M	20EC303.5	10
		OIN	2010303.3	L2
15 (a)	Obtain the Langue transfer of the City			
(0)	Obtain the Laplace transform of the following signals	GM.	2050200 =	111
15 /h\	i) δ[t] ii) e ^{-2t} u(t) iii) Asinw ₀ t u(t)	6M	20EC303.5	L4
15 (b)	State and Prove the initial and final value theorem of Laplace	001		
	transform	6M	20EC303.5	L2

AC 15:00, 2027. Question Paper to land Semester Exemination | Academic Regulation 2020

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Dept.: Civil Engg. | CSE | ECE | EEE | ME | BS &H Name of the Reviewer: N.P.PATWAIK M Designation 1: ASST. Pro1 Organization: LENDI Engineering college Academic Year : 2011 - 2022 : Databose Managnment Systems Semester Curse Title 1. Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study? Yes | No. If yes, please rate it on a five-point scale ______ (5: High to 1: Low) 2. Are the questions being very clear in easily understandable language without any sort of ambiguity? Yes | No. If yes, please rate it on a five-point scale ______ (5: High to 1: Low) 3. Are the questions being crisp and concise and omits irrelevant information that reduces the students' question response time? Yes | No. If yes, please rate it on a five-point scale _______(5: High to 1: Low) 4. Do you observe any of the questions that has less scope to assess the intended knowledge and skill? Yes No. If yes, please rate it on a five-point scale ______ (5: High to 1: Low) 5. Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills? Yes No. If yes, please rate it on a five-point scale ______ (5: High to 1: Low) 6. Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time? Yes No. If yes, please rate it on a five-point scale ______ (5: High to 1: Low) 7. In general, how do you rate the quality and standard of questions?

Form No. AC 23. 00.2021| N S Raju Institute of Technology, Sontyam, Vizag, Andhça Pradesh

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4.	Do you observe any of the questions that has less scope to assess the intended knowledge and skill?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
7.	In general, how do you rate the quality and standard of questions?
AC 28	Form No. AC 23, 00,2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

Preamble: This feedback form AC 23 is intended to receive feedback on the quality of questions to ensure that the intended learning outcomes in terms Knowledge, Understanding and Skill are assessed. Also this form helps us to improve the quality of the questions that appear in the assessment instrument.

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- To inculcate ethical standards and moral values.

Dept.:	Civil Engg. CSE	ECE EEE ME BS &	Н			
Organi	zation nic Year ter	B. Ravi Tesa RIT 2022 III DBMS	Designation		KSOR	A
1.	mastery of the leaf	peing relevant to the asse ners on that course of stud	ay?			d the
	Yes No. If yes, ple	ease rate it on a five-point	scale	_ (5: High to 1	: Low)	
2.	/	eing very clear in easily u				?
	Yes No. If yes, ple	ase rate it on a five-point	scale <u>5</u>	_ (5: High to 1	: Low)	
3.	Are the questions question response	peing crisp and concise a time?	and omits irrelevant in	formation that	reduces the stud	ients'
	Yes No. If yes, ple	ase rate it on a five-point	scale5	_ (5: High to 1:	: Low)	
4.	Do you observe any	of the questions that has	less scope to assess	the intended k	nowledge and ski	ill?
	Yes No. If yes, ple	ase rate it on a five-point	scale	_ (5: High to 1:	: Low)	
5.	Are the questions that facilitates critical	eing addressing appropri al thinking and problem-so	iate cognitive levels of	Revised Bloc	om's Taxonomy (RBT)
	Yes No. If yes, ple	ase rate it on a five-point	scale5	_(5: High to 1:	Low)	
6.	Are the questions be	eing single dimensional av	oiding multiple ideas t	o evaluate one	e response at a tir	пе?
		ase rate it on a five-point s				
7.	9	ou rate the quality and sta				
AC 28	Form No. AC 23.	00.2021 N S Raju Institut	te of Technology, Sont	yam, Vizag, Aı	ndhra Pradesh	
				B.R.	, Tem	

ANadimiralli Salvanarayana Rajudinstitute of Technology (Autonomous) (OAC (Quality Management System (QMS)

NSRIT

Semester End Examination, February, 2022

Degree	B. Tech. (U. G.) Program CSE, CSM &CSD		Academic Year 2021	- 2022
Course	Code 20CS303 Test Duration 3 Hrs. Max. Marks	70	Semester	111
Course	Database Management Systems			
Part A	(Short Answer Questions 5 x 2 = 10 Marks)			A 4 1
No.	Questions (1 through 5)		Learning Outcome (s)	DoK
1 2	What is a database Management System? Give any two examples.		20CS303.1	L1
	List out any two aggregate operators Write the difference between Drop, Delete and Truncate statem	onto in	20CS303.2	L1
3	SQL Server.	ienta III	20CS303.3	L1
5	What is ISAM?		20CS303.4	LI
100000000000000000000000000000000000000	State two-phase locking protocol (Long Answer Questions 5 x 12 = 60 Marks)		20CS303.5	L1
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK
6 (a)	Compare database systems and file systems.	6M	20CS303.1	L2
6 (b)	Explain the different roles performed by the data base administrator.	6M	20CS303.1	L2
	OR		PATE NEW CONTRACTOR	L
7 (a)	Explain the E-R diagram components and notations with their	6M	20002024	1
7 (b)	extended features. Define Data Abstraction and discuss levels of Abstraction.		20CS303.1	L2
1 (0)	Define Data Abstraction and discuss levels of Abstraction.	6M	20CS303.1	L2
8	Explain various operations in relational algebra with example.	12M	20CS303.2	L2
9 (a)	Write about views and undeless as views		F-	
90	Write about views and updates on views. What are the various integrity constraint relations of relational	6M	20CS303.2	L2
9 (b)	model?	6M	20CS303.2	L2
10 (a)	What are Null values? Discuss should disclimit a Mull.	01.1		
10 (b)	What are Null values? Discuss about disallowing Null values. Define a nested query with an example.	6M	20CS303.3	L3
10 (0)	The state of the s	6M	20CS303.3	L3
11 (a)	Illustrate trigger with example.	6M	20CS303.3	L3
11 (b)	Discuss different types of aggregate functions with examples in	6M	20CS303.3	
	SQL.	OW	2005303.3	L2
12 (a)	Define functional dependencies. How are primary keys related to			
	FD's?	6M	20CS303.4	L2
12 (b)	Explain Dense and Sparse indices.	6M	20CS303.4	L2
13	OR Define normalization, why do we need Normalization? Explain	25 7		
13	1NF, 2NF, 3NF Normal forms	12M	20CS303.4	L2
14 (a)	Explain ACID properties and illustrate them them.	014	000000	
14 (b)	Explain ACID properties and Illustrate them through examples. Discuss about conflict Serializability with an example.	6M 6M	20CS303.5 20CS303.5	L2 L3
	OR	OW	2000000.0	ĽĴ
15 (a)	What is ARIES and list the phases of ARIES.	6M	20CS303,5	L3
15 (b)	Discuss about various database recovery approaches.	6M	20CS303,5	L2

AC 15 00 2021 Question Paper for Find Generaler Examinations

Controller of Examinations

NSRIT (A)

Visakhapatnam

Nadimpalli Satyanarayana Raju Institute of Technology (NSRIT) Sontyam, Vizag, Andhra Pradesh

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Dept.: Civil Engg. | CSE | ECE | EEE | ME | BS &H

Organia	mic Year 2021-27	Designation	Asst-prof
1.	Are the questions being relevant to the assessme mastery of the learners on that course of study?	ent of Course Out	comes as well as to understand the
	Yes No. If yes, please rate it on a five-point scale	4	(5: High to 1: Low)
2.	Are the questions being very clear in easily unders	standable language	e without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale	4	(5: High to 1: Low)
3.	Are the questions being crisp and concise and o question response time?	mits irrelevant info	ormation that reduces the students
	Yes No. If yes, please rate it on a five-point scale	4	(5: High to 1: Low)
4.	Do you observe any of the questions that has less	scope to assess t	he intended knowledge and skill?
	Yes No. If yes, please rate it on a five-point scale	4	(5: High to 1: Low)
5.	Are the questions being addressing appropriate of that facilitates critical thinking and problem-solving	cognitive levels of skills?	Revised Bloom's Taxonomy (RBT)
	Yes No. If yes, please rate it on a five-point scale	3	(5: High to 1: Low)
6.	Are the questions being single dimensional avoiding	g multiple ideas to	evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale	4	(5: High to 1: Low)
7.	In general, how do you rate the quality and standar	d of questions?	
AC 25	Form No. AC 23. 00.2021 N S Raju Institute of	Technology, Sonty	/am, Vizag, Andhra Pradesh

WadimpalliSalyanarayanaRajitiInstitute oliTechnology/(Autonomous) 10AC/20tallity WanagementSystem(0MS)

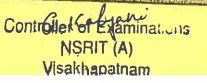


Semester End Examination, January/February 2022

Course Design and Analysis of Algorithms						
Course Code	20CS302	Test Duration	3 Hrs.	Max. Marks 70	Semester	2021 - 2022
	B. Tech. (U. G.)	Program	CSE		Academic Year	2021 - 2022

FAILA	(Short Answer Questions 5 x 2 = 10 Marks)			
No.	Questions (1 through 5)			
1	Define time complexity and space complexity		Learning Outcome (s)	DoK
2	Write an algorithm to find the sum of squares of first n integers		20CS302.1	L1
3	Compare divide and conquer strategy with dynamic programming.		20CS302.2	L2
4	What are NP-hard problems?		20CS302.3	L2
5	State the reason for terminating the search path at the current nod		20CS302.4	L1
	Creation and poditional and poditional and property of the pro	e in the	20CS302.5	L2
	(Long Answer Questions 5 x 12 = 60 Marks)			
No.	Questions (6 through 15)	Marks	Looming Outcome ()	
6 (a)	Explain asymptotic classes with examples.	6M	Learning Outcome (s)	DoK
6 (b)	Write a recursive algorithm to find the factorial of a given number and	OIVI	20CS302.2	L2
- (5)	analyze the time and space complexity.	6M	20CS302.2	L2
7 (a)	Write a linear search algorithm and analyze the efficiency of the			
7 (b)	- agorithti	6M	20CS302.2	L2
7 (0)	Write the bubble sort algorithm and analyze its complexity Write the Prim's algorithm and using Prim's algorithm, determine the	6M	20CS302.2	L2
8 (a)	3 <u>h</u> c 6 a 5 d	12M	20CS302.4	L3
-7	Find an optimal solution to the knapsack instance n=4 objects and the			-
	3, 5).	12M	20CS302.4	L3
0 (b)	Write a quick sort algorithm and trace this algorithm for n =8 elements 24,12, 35, 23, 45, 34,20, 48	12M	20CS302.4	
	The first of the control of the cont	1 = 171	2000002,4	L3
	Write the topological sorting algorithm and a life in a			
(a)	Write the topological sorting algorithm and apply it to find the topological ordering of vertices in the following graph	12M	20CS302.4	L3

AC 15, 00, 2021 Question Paper lon End Semester Examination | Academic Regulation 2020



12 (a)	Describe NP-hard, NP-complete problems, and their characteristics. Give examples in graph problems	4M	20CS302.3	L2
12 (b)	Sort the following set of numbers using merge sort algorithm 5, 3, 7, 1, 8, 4, 6,9		20CS302.3	L2
	OR	lance compa		A
13 (a)	State and explain cook's theorem.	12M	20CS302.3	L2
	The second secon			_ = 200
14 (a)	Solve the following instance of sum of subset problem: S = {1,5,2,7} with d = 8 using bactracking	6M	20CS302.5	L3
14 (b)	Construct state space tree for 4 queen's problem with one solution	6M	20CS302.5	L3
	OR		# 1777 mar	dia wa
	Apply branch bound principle to solve the following TSP			
	CO C1 C2 C3 C4			
	CO INF 20 30 10 11			
15 (a)	C1 15 INF 16 4 2	12M	20CS302.5	L3
	C2 3 5 INF 2 4			
	C3 19 6 18 INF 3			
	C4 16 4 7 16 INF			1

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Dept.: Civil Engg. | CSE | ECE | EEE | MÉ | BS &H

	of the Reviewer : B·V zation : RIT mic Year : 202 ster : III Title : The	(A)		Assa. proof.
1.	Are the questions being rele mastery of the learners on th	evant to the assessment at course of study?	of Course Out	comes as well as to understand the
	Yes No. If yes, please rate	it on a five-point scale _	5	(5: High to 1: Low)
2.	Are the questions being very	clear in easily understar	ndable languag	e without any sort of ambiguity?
	Yes No. If yes, please rate i			
3.	Are the questions being cris question response time?	p and concise and omit	s irrelevant info	ormation that reduces the students
	Yes No. If yes, please rate i	t on a five-point scale	5	(5: High to 1: Low)
4.	Do you observe any of the qu	uestions that has less so	ope to assess ti	he intended knowledge and skill?
	Yes No. If yes, please rate i			
5.	Are the questions being add that facilitates critical thinking	ressing appropriate cog and problem-solving ski	nitive levels of	Revised Bloom's Taxonomy (RBT)
	Yes No. If yes, please rate it	t on a five-point scale	5	(5: High to 1: Low)
6.				evaluate one response at a time?
	Yes No. If yes, please rate it			
7.	In general, how do you rate th	ne quality and standard o	f questions?	
AC 23	Form No. AC 23. 00.2021	N S Raju Institute of Tec	hnology, Sonty	am, Vizag, Andhra Pradesh

		Se	mester End Exami	nation, J	anuary/Februa	iry, 20)22		
Degree	1	B. Tech. (U. G.)	Program	ME			Academic Year	2021 -	2022
Course	Code	20ME302	Test Duration	3 Hrs.	Max. Marks	70	Semester		
Course		Thermodynamic	S		***************************************	-	ocinicoto:	-	
Don't A ((Cl								
Part A	Snort Ans	swer Questions 5	x 2 = 10 Marks)						
No.		ns (1 through 5)					Learning Outc		DoK
1 2	What is	Quasi static proces	SS?				20ME301		L1
3	VVDat is	a steady flow proc	ess and unsteady flo	w process	?		20ME301		L2
4			nd? Why it is imposs	ible?			20ME301		L2
5		a pure substance?					20ME301		L1
	VVIIdt is	wer Questions 5	and relative humidity	<i>t</i>			20ME301	1.5	L1
No.		ns (6 through 15)	x 12 = 60 Marks)						
140.			tala themanetes (c.	ations to the		Mark	s Learning Outo	ome (s)	DoK
	t = a in p	+ h	tain thermometer is o	given by tr	ie relation				
			nts and p is the then	mamatria	oronoriu of the				
6 (a)	fluid in	the themometer	If at the ice poin	t and cla	property of the	6M	20ME301		1.2
- (-/	thermom	etric properties ar	re found to be 1.5 a	nd 75 rec	nactively what	OIV	ZUIVIESU	1.1	L3
	will be th	ne temperature co	responding to the t	hemome	tric property of				
	3.5 on C	elsius scale	many to the		are property of				
6 (b)	Explain t	he working of cons	stant volume gas the	mometer		6M	20ME301	1.1	L2
				OR		0111	20111200		62
	A piston	and cylinder mach	ine containing a fluid	d system h	as a stiming				
	device.	The piston is friction	onless, and it is held	d down ac	ainst the fluid				
7 (a)	due to at	mospheric pressu	re of 101.3 kPa. The	stirring d	evice is turned	5M	20ME301	1.4	1.0
(-/	9500 rev	olutions with an a	verage torque agair	ist the flu	id of 1.25 Nm.	ועוכ	201VIE3U	1.1	L3
	Meanwhi	le the piston of 0.0	65 m diameter move	s out 0.6 r	n. Find the net				
	work tran	sfer for the system	n.						
	initial val	2.20. 10 a close	d system 150 kJ of	work is s	supplied. If the				- 4
7 (b)	p = 8 - 4	Where picie b	pressure of the syst	em chang	es as	7M	20ME301	1.1	L3
	and pres	sure of the system	ar and V is in m ³ , de	termine tr	ie iinai volume				
	and pros	sole of the system							
	A system	receives 50 kJ o	of heat while expand	ling with v	olume chance				
	of 0.14 m	³ against an atmo	sphere of 1.2 × 105	N/m². A m	ass of 90 kg in				
	the surro	undings is also lift	ed through a distance	e of 5.5 m	etres.				
	(i) Find th	ne change in energ	gy of the system.						
8 (a)	(ii) The s	ystem is returned	to its initial volume	by an adi	abatic process	6M	20ME301	1.2	L3
	which re	quires 110 kJ of	work. Find the ch	nange in	energy of the				
	system.		528						
	(III) For the	ne combined proc	esses of (i) and (ii)	determine	the change in				
R (b)		f the system.				353		(%)	
8 (b)	explain i	ist law of thermod	lynamics applied to a	process		6M	20ME301	1.2	L2

6M

20ME301.2

20ME301.2

L3

L2

AC 15 (iii) 2021 Obertion Paper (or) and Stampster Eventpation Academic Reputation 2021

5 × 105 N/m². Determine: (i) The mass of gas;

Take $\gamma = 1.4$, R = 294.2 J/kg°C

turbine with the help of a neat diagram

(ii) The value of index 'n' for compression; (iii) The increase in internal energy of the gas;

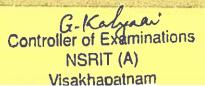
9 (a)

9 (b)

A cylinder contains 0.45 m³ of a gas at 1 × 105 N/m² and 80°C. The gas is compressed to a volume of 0.13 m³, the final pressure being

(iv) The heat received or rejected by the gas during compression.

Explain the steady flow energy equation applied to Steam of Gas



10 (a)	An ideal gas is heated from temperature T_1 to T_2 by keeping its volume constant. The gas is expanded back to its initial temperature according to the law pv^n = constant. If the entropy change in the two processes are equal, find the value of n in terms of the adiabatic index γ .	6M	20ME301.3	L2
10 (b)	Discuss about Carnot theorem with neat diagram OR	6M	20ME301.3	L2
11 (a)	A reversible heat pump is used to maintain a temperature of 0°C in a refrigerator when it rejects the heat to the surroundings at 25°C. If the heat removal rate from the refrigerator is 1440 kJ/min, determine the C.O.P. of the machine and work input required.	6M	20ME301.3	L3
11 (b)	Explain about heat engine and heat pump	6M	20ME301.3	L2
12 (a)	Two boilers one with superheater and other without superheater are delivering equal quantities of steam into a common main. The pressure in the boilers and main is 20 bar. The temperature of steam from a boiler with a superheater is 350°C and temperature of the steam in the main is 250°C. Determine the quality of steam supplied by the other	6M	20ME301.4	L3
12 (b)	boiler. Take c _{ps} = 2.25 kJ/kg. Steam at 140 bar has an enthalpy of 3001.9 kJ/kg, find the temperature, the specific volume and the internal energy. OR	6M	20ME301.4	L2
	1000 kg of steam at a pressure of 16 bar and 0.9 dry is generated by a boiler per hour. The steam passes through a superheater via boiler			
13 (a)	stop valve where its temperature is raised to 380°C. If the temperature of feed water is 30°C, determine: (i) The total heat supplied to feed water per hour to produce wet steam. (ii) The total heat absorbed per hour in the superheater.	7M	20ME301.4	L3
13 (b)	Take specific heat for superheated steam as 2.2 kJ/kg K Find the specific volume, enthalpy and internal energy of wet steam at 18 bar, dryness fraction 0.85	5M	20ME301.4	L2
14 (a)	Derive the expressions for the internal energy and specific heats for mixtures of ideal gases.	6M	20ME301.5	L2
14 (b)	On a particular day the weather forecast states that the dry bulb temperature is 37°C, while the relative humidity is 50% and the barometric pressure is 101.325 kPa. Find the humidity ratio, dew point temperature and enthalpy of moist air on this day. OR	6M	20ME301.5	L3
15 (a)	Explain the following:	8M	20ME301.5	L2
15 (b)	What do you understand by dry bulb temperature and wet bulb temperatures? When do the DBT, WBT and DPT become equal?	4M	20ME301.5	L2

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Dept.:	Civil Engg. CSE ECE EEE ME BS &H					
Name Organ Acade Semes Curse						
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?					
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)					
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity?					
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)					
3.	Are the questions being crisp and concise and omits irrelevant information that reduces the students' question response time?					
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)					
4.	Do you observe any of the questions that has less scope to assess the intended knowledge and skill?					
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)					
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?					
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)					
6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time?					
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)					
7.	In general, how do you rate the quality and standard of questions?					
AC.2	AC 28 Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh					

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Dept.:	Civil Engg. CSE EČÉ EEE ME BS &H
Name Organ Acade Semes Curse	of the Reviewer : N. Rajc Seckly Designation : Asso P. 1 mic Year : 2021 - 22 ster : 81 Title : PVSP
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
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4.	Do you observe any of the questions that has less scope to assess the intended knowledge and skill?
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5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?
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6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
7.	In general, how do you rate the quality and standard of questions?
AC 23	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh



Semester End Examination, January/February, 2022

Degree B. Tech. (U. G.) Program ECE Academic Year 2021 - 2022
Course Code 20EC304 Test Duration 3 Hrs. Max. Marks 70 Semester III
Course Random Variables and Stochastic Process

Part A	(Short Answer Questions 5 x 2 = 10 Marks)	витель при «прирокцен» прирокценую февуро-высована ч	and the state of t	1999-d-sir
No.	Questions (1 through 5)	Marketter and the state of the	Learning Outcome (s)	Del
1	State Baye's theorem of probability		20EC304.1	DoK
2	List any two properties of moment generating function		20EC304.1	<u>L1</u>
3	State Central Limit Theorem	* man	1 c g	L1
4	List any four properties of Power Spectral Density		20EC304.3 20EC304.4	Ц
5	Define effective noise temperature		20EC304.5	L1
Part B	(Long Answer Questions 5 x 12 = 60 Marks)		2000304.3	L1
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK
6 (a)	Define Joint Probability, Marginal Probability and Conditional Probability and also derive the relation among them.	6M	20EC304.1	L2
6 (b)	In a family consisting of two children, probability for a child to be a boy is 0.5. Find the probability that at least one of the two children is a boy OR	6M	20EC304.1	L3
7	A random variable X has pdf shown below. i) Find the value of k. ii) Find P(1/4< X < $\frac{1}{2}$). $f(x) = \begin{cases} kx^2(1-x^3), & 0 < x < 1 \\ 0, & otherwise \end{cases}$	12M	20EC304.1	L2
8	Find the mean and variance of uniformly distributed random variable OR	12M	20EC304.2	L2
	Magnetical Control of the Control of			
9 (a)	Let Y=2X+3, If the random variable 'X' is uniformly distributed over [-1, 2], determine pdf of random variable 'Y', f _y (y)	6M	20EC304.2	L2
9 (b)	Explain about the characteristic function and state its properties	6M	20EC304.2	L2
10 (a)	List any four properties of joint density function Two random variables X and Y have a joint probability density function	2M	20EC304.3	L1
0 (b)	a) Find the marginal density functions of X and Y b) Are X and Y statistically independent?	10M	20EC304.3	Ł3
	OR			

AG 15 0092021; Question Paper for End Semester Examination | Academic Regulation 2020

11 (a)	Find the density function of W=X+Y, where the densities of X and Y are assumed to be: $f_x(x)=4u(x)e^{-4x}$ and $f_y(y)=5u(y)e^{-5y}$	6M	20EC304.3	L2	
11(b)	The joint characteristic function of two random variables X and Y is given by	6M	20EC304.3	L3	
12 (a)	State and explain four properties of auto-correlation of a random process 'X(t)'	6M	20EC304.4	L2	
12 (b)	Find the mean and variance of a stationary random process whose auto-correlation function is given by $R_{XX}(\tau) = 16+3/(8+\tau^2)$	6M	20EC304.4	L4	
13 (a)	OR Prove that the random process $X(t)$ = A $Cos(\omega t + \Theta)$ is wide sense stationary if it is assumed that A and ω are constants and Θ is uniformly distributed random variable in the interval $[0,2\pi]$	8M	20EC304.4	L4	(
13 (b)	State and explain the Wiener-Khintchine relation	4M	20EC304.4	L2	
14 (a)	Derive the relation between PSDs of input and output random process of an LTI system	6M	20EC305.5	L2	
14 (b)	If $Y(t) = X(t+a) - X(t-a)$ then show that $S_{YY}(\omega) = 4 S_{XX}(\omega) \sin^2(a\omega)$ where 'X(t)' is the input random process and 'Y(t)' is the output random process of an LTI system.	6M	20EC304.5	L3	
15 (a)	OR Define Band limited and Narrow band Processes	2M	20EC304.5	L1	
15 (b)	Derive the expression for average noise figure of cascaded two port networks	10M	20EC304.5	L3	

Preamble: This feedback form AC 23 is intended to receive feedback on the quality of questions to ensure that the intended learning outcomes in terms Knowledge, Understanding and Skill are assessed. Also this form helps us to improve the quality of the questions that appear in the assessment instrument.

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- To inculcate ethical standards and moral values.

рери.:	Civil Engg. CSE	: ECE EEE	ME BS &F	-1				
Organi	mic Year eter	RIT		Design ULM etal		:	A481	Poolit
1.	Are the question mastery of the le	s being releva amers on that	nt to the asse course of stud	ssment of Cours ly?	se Outcomes as	s well as	s to unde	rstand the
	Yes No. If yes, p	please rate it o	n a five-point s	scale	(5: High	to 1: Lo	ow)	
2.	Are the questions	s being very cl	ear in easily ur	nderstandable la	nguage without	any so	rt of ambi	guity?
	Yes No. If yes, p							
3.	Are the question question respons	s being crisp : e time?	and concise a	nd omits irreleva	ant information	that red	duces the	students'
	Yes No. If yes, p	olease rate it o	n a five-point s	scale	(5: High	to 1: Lo	ow)	
4.	Do you observe a	any of the ques	tions that has	less scope to as	sess the intend	ed knov	wledge ar	nd skill?
	Yes No. If yes, p							
5.	Are the questions that facilitates crit	s being addres ical thinking ar	ssing appropria nd problem-sol	ate cognitive lev lving skills?	els of Revised	Bloom's	s Тахоло	my (RBT)
	Yes No. If yes, p	lease rate it o	n a five-point s	cale	(5: High	to 1: Lo	w)	
6.	Are the questions	being single d	limensional av	oiding multiple id	deas to evaluate	one re	sponse a	t a time?
	Yes No. If yes, p	lease rate it or	n a five-point s	cale4	(5: High	to 1: Lo	w)	
7.	In general, how do	o you rate the	quality and sta	ndard of question	ns?			
AC 28	Form No. AC 2	3. 00.2021! N	S Raiu Institute	e of Technology	Sonham Viza	a Andh	rn Brado	o.b.

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NSRIT

Semester End Examination, February, 2022

Degree	B. Tech. (U. G.)	Program	Mechanical Engineering			Academic Year	2021 - 2022	
Course Code	20ME303	Test Duration	3 Hrs.	Max. Marks	70	Semester	III	
Course Material Science & Metallurgy								

Part A (Short Answer Questions 5 x 2 = 10 Marks)		***************************************	
No.	Questions (1 through 5)	BEDAY	Learning Outcome (s)	DoK
1	What is electron compound? Give examples		20ME303.1	L2
2	Compare spheroidal graphite cast Iron and gray cast Iron		20ME303.2	L2
3	What is meant by hardenability?		20ME303.3	L1
4	List any two applications of powder metallurgy		20ME303.4	L1
5	What are crystallized ceramics?		20ME303.5	L1
Part B (Long Answer Questions 5 x 12 = 60 Marks)			
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK
6 (a)	What is a crystalline material? Distinguish between single crystal material and polycrystalline material?	6M	20ME303.1	L2
6 (b)	What are intermediate phases? What are the various types of intermediate phases?	6M	20ME303.1	L2
	OR			Arraman
7 (a)	State and explain Gibbs phase rule.	6M	20ME303.1	L2
7 (b)	Draw a neat labeled Iron-Iron Carbide diagram and explain eutectic and eutectoid reaction in it.	6M	20ME303.1	L2
1000	and actional condition in it.	-		
8 (a)	Explain structure and properties of Gray cast iron.	6M	20ME303.2	L2
8 (b)	Differentiate between white cast iron and malleable cast iron.	6M	20ME303.2	L2
	OR	OIVI	201412303,2	LZ
9 (a)	Describe the composition, heat treatment and applications of the Titanium and its alloys	6M	20ME303,2	L2
9 (b)	Discuss briefly about super alloys and mention their applications.	6M	20ME303.2	L2
10 (a)	Differentiate between annealing and normalizing.	6M	20ME303.3	L2
10 (b)	Define hardenability of a material and explain the factors affecting hardenability.	6M	20ME303.3	L2
NACC SEE	OR	-		Land
11 (a)	Draw a TTT diagram for 0.4%C steel and identify the micro structural phases. Explain its features.	6M	20ME303.3	L2
11 (b)	Describe briefly about induction hardening method.	6M	20ME303.3	L2
12 (a)	Explain powder extrusion process.	6M	20ME303.4	L2
12 (b)	Describe rapid sintering methods.	6M	20ME303.4	L2
	OR			15
13 (a)	Explain different stages of manufacturing of powder metallurgy		00115000	T
	components.	6M	20ME303.4	L2
13 (b)	What is sintering in powder metallurgy? Explain.	6M	20ME303.4	L2
14 (a)	Write the classification of ceramics? Explain with examples.	6M	20ME303.5	L2
14 (b)	Explain the importance and applications of composites. OR	6M	20ME303.5	L2
15 (a)	Describe various methods of the manufacturing composites.	6M	20ME303.5	L2
15 (b)	How do you manufacture the composites powder metallurgy components?	6M	20ME303.5	L1

Preamble: This feedback form AC 23 is intended to receive feedback on the quality of questions to ensure that the intended learning outcomes in terms Knowledge, Understanding and Skill are assessed. Also this form helps us to improve the quality of the questions that appear in the assessment instrument.

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Dept.:	Civil Engg. CSE	E ECE EĔ	EIMEIBS&H				
Organi		: M. Ma : A N IT : 2021- : 111 : wm 8	S - LL	Designation	1	: Asst-Pro	k.
1.	Are the question mastery of the le	s being relev amers on tha	ant to the assessmant course of study?	ent of Course Ou	tcomes as we	ll as to understand	d the
	Yes No. If yes,	please rate it	on a five-point scale	3_	_(5: High to 1	: Low)	
2.	Are the questions	s being very o	clear in easily under	standable languaç	ge without any	sort of ambiguity?)
	Yes No. If yes, p	please rate it	on a five-point scale	3	_ (5: High to 1	: Low)	
3.	Are the question question respons	s being crisp e time?	and concise and c	omits irrelevant in	formation that	reduces the stude	ents'
	Yes No. If yes, p	olease rate it	on a five-point scale	2	_ (5: High to 1	: Low)	
4.	Do you observe a	any of the que	estions that has less	scope to assess	the intended k	nowledge and skill	1?
	Yes No. If yes, p	olease rate it	on a five-point scale	4	_ (5: High to 1:	: Low)	
5.	Are the questions that facilitates crit	s being addre ical thinking a	essing appropriate of and problem-solving	cognitive levels of skills?	FRevised Bloo	om's Taxonomy (R	RBT)
	Yes No. If yes, p	lease rate it o	on a five-point scale		_ (5: High to 1:	: Low)	
6.	Are the questions	being single	dimensional avoidir	ng multiple ideas t	o evaluate one	e response at a tim	ne?
	Yes No. If yes, p	lease rate it o	on a five-point scale		_ (5: High to 1:	: Low)	
7.	3		quality and standar	·			
/AC/20	Form No. AC 2	3. 00.2021 N	IS Raju Institute of	Technology, Sont	yam, Vizag, A	ndhra Pradesh	

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Semester	End Examin	ation, Janua	irv/Fehruary.	2022

Degree	B. Tech.		rogram			& MECH		Academic Year	2021 -	2022
Course Code			est Duratio		3 Hrs.	Max. Marks	70	Semester	ll	\$
Course	Numerio	al Methods	& Transfe	or ms						
Part A (Shor No. Que	Answer Que		= 10 Mark	s)				Learning Outo	ome (s)	DoK
2 Pro	e the iteration $a = that \Delta = \nabla t$		Regula Fal	si meth	od and Se	cant method		20BSX13 20BSX13	3.4	L1 L2
	Simpson's to $\frac{1}{2}$		rule					20BSX13 20BSX13		L1 L2
	the expressi		er integral, F	ourier S	Sine and Fo	ourier Cosine	integrals			L1
Part B (Long			2 = 60 Mar	ks)			14-4-		(-)	D-14
Usi	stions (6 thro g bisection n		oute a real	root of	the equat	ion xex - 2	Mark =			DoK
⁶ (a) 0, c	rrect to three	decimal pla	ces.				6M	20BSX13	3.1	L2
	a real root of nod, correct to				π.	on - Raphson	n 6M	20BSX13	3.1	L3
r (a) Suc	a real root of essive appro e the followin	ximation me	thod, correc	ct to for	r decimal		y 6M	20BSX13	3.1	L2
7 (b) 5x	y + z = 10; 2; , 0).					e solution	6M	20BSX1	3.1	L3
Eva	uate									
8 (a)	Δ	$\int_{0}^{2} \left[\frac{1}{x^2 + 5x} \right]$	+ 6] + 4	\[e ^{3x}	og2x]		6M	20BSX1	3.2	L3
The	area A of a c	ircle of diam	eter d is giv	en for t	he followi	ng values.				
Cal	ulate the are	a of a circle	of diameter	7 using	Newton's	s forward				
8 (b) inte	polation form	ula.					6N	20BSX1	3.2	L2
d	5	6	9	11						
A	12	13	14	16	OR					
U	ing the metho	od of separat	tion of symi	bols, pr	ove that					
0.43	+ u ₁ +u ₂ +u ₃									
(n	$+1)C_1u_0$	+ (1+1)	.2AH2 +(n + 1	$C_3\Delta^2u$	7	6N	1 20BSX1	3.2	L3
	$\dots (n+1)$	11.			des between	40 45				
301000000	d the number	-40 40-		ied mai -60	60-70	70-80				
3 (0)	o. of 31 tudents		51		35	31	60	1 20BSX1	3.2	L2
Eva	uate									

by Trapezoidal and Simpson's 3/8th rule, by dividing the interval (0, 6) into 6 parts

> G. Kalyeni
> Controller of Examinations NSRIT (A) Visakhapatnam

20BSX13.3

6M

L2

10 (b)	Solve $y' = xy + 1$, $y(0) = 1$ using Picard's method and compute $y(0.2)$.	6M	20BSX13.3	L3
11 (a)	Evaluate $\int_0^1 \frac{1}{1+x} dx$ by Simpson's $\frac{1}{3}$ rd and Simpson's $\frac{3}{8}$ th rule.	6M	20BSX13.3	L2
11 (b)	Using Euler method, evaluate $y(0.1)$ and $y(0.2)$ given that $y^1 = x + y, y(0) = 1$.	6M	20BSX13.3	L3
12 (a)	Show that $\int_0^\infty t^2 e^{-4t} \sin 2t dt = \frac{1}{250}$	6M	20BSX13.4	L3
12 (b)	Using convolution theorem, evaluate the inverse Laplace transform of $\frac{s}{(s^2 + 16)^2}$	6M	20BSX13.4	L2
	OR Evaluate the Laplace transform of			
13 (a)	e ^{at} sinbt	6M	20BSX13,4	L2
13 (b)	Solve $y'''(t) + y(t) = 1$, if $y(0) = y'(0) = y''(0) = 0$ using transform method.	6M	20BSX13.4	L3
	Show that $f'(x) = e^{-\frac{x^2}{2}}$ is self-reciprocal with respect to Fourier			
14 (a)	transform.	6M	20BSX13.5	L3
14 (b)	r for 0 < r < 1	6M	20BSX13.5	L2
	OR			
15 (a)	t fild	6M	20BSX13.5	L2
15 (b)	Find the Fourier sine transform of $f(x) = \frac{e^{-ax}}{x}$.	6M	20BSX13.5	L3
	LAW WAS			

Preamble: This feedback form AC 23 is intended to receive feedback on the quality of questions to ensure that the intended learning outcomes in terms Knowledge, Understanding and Skill are assessed. Also this form helps us to improve the quality of the questions that appear in the assessment instrument.

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	Civil Engg. CSE ECE EEE ME BS &H
Name Organi Acadei Semes Curse	of the Reviewer: MTS lakshman Designation: Asst profinic Year: 2021-22. ter: III Title: Surveying.
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale
3.	Are the questions being crisp and concise and omits irrelevant information that reduces the students' question response time?
	Yes No. If yes, please rate it on a five-point scale
4.	Do you observe any of the questions that has less scope to assess the intended knowledge and skill?
	Yes No. If yes, please rate it on a five-point scale
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
7.	In general, how do you rate the quality and standard of questions?
AC 25	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

NSRIT

Semester End Examination, February, 2022

Course Code 20CE303 Test Duration 3 Hrs. Max. Marks 70 Semester III Part A (Short Answer Questions 5 x 2 = 10 Marks) No. Questions (1 through 5) 1 Define principles of surveying 20CE303.1 L1 2 Distinguish between back sight and Fore sight 20CE303.3 L1 3 Define Tangent Point and Point of curve. 20CE303.3 L1 5 Define GIS. 20CE303.3 L1 6 Define GIS. 20CE303.3 L1 6 Define GIS. 20CE303.3 L1 7 Define GIS. 20CE303.3 L1 7 Define GIS. 20CE303.4 L1 8 Describe the linear measurement of chaining on a slope along with their advantages and disadvantages. OR 9 What is meant by local attraction? How is it detected and corrected for local attraction. OR 1 Describe the height of instrument method of reducing the levels. Compare the height of instrument method with rise and fall method. OR 8 Explain the procedure to determine the tacheometric constants by a Fixed Hair Method b) Movable Hair Method b) Movable Hair Method b) Movable Hair Method Curves with the help of a neat sketch. Explain briefly its necessity. OR 11 Discuss about the recent advancements in total stations and their usefulness in monitoring structures. OR 12 Describe the various segments of GPS surveying. Also, give a brief account of the applicability and limitations of each technique. 14 Discuss the possible advantages and disadvantages of using a raster GIS and vector GIS. OR 15 Discuss in detail about the Supervised and Linsupprevised images.	Degr	Olan Engineering		Academic Year 20	021-2022
Part A (Short Answer Questions 5 x 2 = 10 Marks) No. Questions (1 through 5) 1 Define principles of surveying 2 Distinguish between back sight and Fore sight 3 Define appent Point and Point of curve. 4 Define photogrammettry. 5 Define GIS. Part B (Long Answer Questions 5 x 12 = 60 Marks) No. Questions (6 through 15) Cuestions (6 through 15) Describe the linear measurement of chaining on a slope along with their advantages and disadvantages. OR What is meant by local attraction? How is it detected and corrected for local attraction. Describe the height of instrument method of reducing the levels. Compare the height of instrument method with rise and fall method. OR Explain the procedure to determine the tacheometric constants by a) Fixed Hair Method b) Movable Hair		se Code 20CE303 Test Duration 3 Hrs. Max. Mark	s 70		
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No. Questions (6 through 15) Describe the linear measurement of chaining on a slope along with their advantages and disadvantages. OR What is meant by local attraction? How is it detected and corrected for local attraction. Describe the height of instrument method of reducing the levels. Compare the height of instrument method with rise and fall method. OR Explain the procedure to determine the tacheometric constants by a) Fixed Hair Method What is a transition curve? State the various types of transition curves with the help of a neat sketch. Explain briefly its necessity. OR Discuss about the recent advancements in total stations and their usefulness in monitoring structures. Explain the aspects of flight planning for an aerial survey and obtain an expression for the number of photographs required for given area of length and width of a survey OR Describe the various segments of GPS surveying. Also, give a brief account of the applicability and limitations of each technique. Discuss the possible advantages and disadvantages of using a raster GIS and vector GIS. OR Discuss in detail about the Supervised and Unsupervised image.	Part E	(Long Answer Questions 5 x 12 = 60 Marks)		2001303.3	L.I
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Discuss the possible advantages and disadvantages of using a raster GIS and vector GIS. OR Discuss in detail about the Supervised and Unsupervised image.		OR			
Discuss the possible advantages and disadvantages of using a raster GIS and vector GIS. OR Discuss in detail about the Supervised and Unsupervised image.	13	Describe the various segments of GPS surveying. Also, give a	12M	20CE303 /	12
OR Discuss in detail about the Supervised and Unsupervised image		and ilmitations of each technique.	16111	2006303.4	LZ
OR Discuss in detail about the Supervised and Unsupervised image	14	Discuss the possible advantages and disadvantages of using a			
Discuss in detail about the Supervised and Unsupervised image		raster GIS and vector GIS.	12M	20CE303.5	L2
classification in Geographical Information System 12M 20CE303.5 L2	4.5	Discuss in detail about the Superiord and University			
	15	classification in Geographical Information System.	12M	20CE303.5	L2

Preamble: This feedback form AC 23 is intended to receive feedback on the quality of questions to ensure that the intended learning outcomes in terms Knowledge, Understanding and Skill are assessed. Also this form helps us to improve the quality of the questions that appear in the assessment instrument.

The Vision of the Institute

To promote societal empowerment and become an institution of excellence in the field of engineering education and research.

- To develop the students into outstanding professionals through innovative Teaching-Learning process.
- To uphold research through long term Academia-Industry interaction.

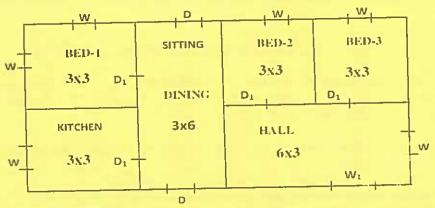
•	To inculcate ethical standards and moral values.
Dept.:	Civil Engg. CSE ECE EEE ME BS &H
Organi Acadei Semes	of the Reviewer: M.T.S. lakehmay and Designation Arst: profinite : Building Planning and Drawing
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
3.	Are the questions being crisp and concise and omits irrelevant information that reduces the students' question response time?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
4.	Do you observe any of the questions that has less scope to assess the intended knowledge and skill?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?
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6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
7.	In general, how do you rate the quality and standard of questions?
A0.28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh
	16gr



Semester End Examination, January/February, 2022

Degre Cours	se Code 20CE302 Test Duration 3 Hrs. Max. M			2021 – 2022 III
Part A	(Short Answer Questions 14 x 3 = 42 Marks) - Answer any thre Questions (1 through 5)	Marks	e following Learning Outcome	(s) DoK
1(a)	Explain the importance of dimensioning & conventional representations in the drawing and Draw the conventional signs for the following:- i) Brick ii) iii) Concrete iii) Glass iv) Timber.	or 7 M	20CE302.1	L1
1(b)	Draw the isometric view of 2 brick English Bond with 5 as minimum number of layers.	7 IVI	20CE302.1	L2
2(a)	Write in detail about for guidelines for planning the buildings to su their functional requirements	it 7 M	20CE302.2	L2
2(b)	List out the bye- laws and regulations which include all the feature of various types of Buildings.	s 7 M	20CE302.2	L2
3(a)	What is meant by ASPECT in planning of a residential building?	7 M	20CE302.3	L2
3(b)	In any residential building, What are the essentials, which nee consideration in grouping of dwelling unit	d 7 M	20CE302.3	L2
4(a)	Explain the different features of a king post roof truss	7 M	20CE302.4	L2
4(b)	Draw the working drawing of a Glazes door	7 M	20CE302.4	L2
5(a)	Draw the layout of a health centre or Doctor Clinic	7 M	20CE302.5	L2
5(b)	Explain the Principle of Planning a hospital	7 M	20CE302.5	L2
Part E	(Long Answer Questions 1 x 28 = 28 Marks) – Answer any one			
No.	Questions (6 through 7)	Marks	Learning Outcome	(s) DoK
6(a)	Draw a neat sketch of partly paneled and glaze door of size 1.0 2.0 m	14 (V)	20CE302.4	L2
6(b)	Draw to a suitable scale, the section and elevation of a fully panele double shuttered door	d 14 M	20CE302.4	L2
7	Draw the Plan and Elevation of the residential Building with th following dimensions. Assume suitable dimensions as minimum dimensions as BIS	e n 28 M	20CE302.5	L2

NSRIT (A) Visakhapatnam



REFERENCE:-D-1006X2000 mm; D₁-900X2000 mm; W-900X1200 mm; † V₁-_900X1000 mm; V 800X300 mm; All dimensions of rooms are e in m

Preamble: This feedback form AC 23 is intended to receive feedback on the quality of questions to ensure that the intended learning outcomes in terms Knowledge, Understanding and Skill are assessed. Also this form helps us to improve the quality of the questions that appear in the assessment instrument.

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•	To develop the students into outstanding professionals through innovative Teaching-Learning process. To uphold research through long term Academia-Industry interaction. To inculcate ethical standards and moral values.
Dept.:	Civil Engg. CSE ECE EEE ME BS &H
Organi Acadei Semes	of the Reviewer: S. Addaluhni Designation : Ast. prof. zation: VPT(A) mic Year: 2021-22 ter: III Title: Mathematical Foundation for computer Science.
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
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7.	In general, how do you rate the quality and standard of questions?
AOXXX	Form No. AC 23 00 2021 N.S. Rain Institute of Tachnelogy, September 15-11





Semester End Examination, January/February, 2022

Degree B. Tech. (J. G.) Program (DS) Academic Year 2021 - 2022 Course Code 20BSX16 Test Duration 3 Hrs. Max. Marks 70 Semester III Mathematical Foundations for Computer Science Part A (Short Answer Questions 5 x 2 = 10 Marks) No. Questions (1 through 5)	D		D. TA. (U. O.)		CSE, CS	SE (AI & ML) &	CSE			
Part A (Short Answer Questions 5 x 2 = 10 Marks) No.	Degree		B. Tech. (U. G.)	Program			Academic Year 2021		- 2022	
Part A (Short Answer Questions 5 x 2 = 10 Marks) No. Questions (1 through 5) 1 Define Tautology and contradiction? 2 Define Bubgroup 3 Find the gcd of 615 and 1080, and find the integers x and y such that 20BSX16.2 L1 gcd(615, 1080) = 615x+1080y. Find the first 5 terms of the recurrence relation $a_n = a_{n-1} + a_{n-3}$, 20BSX16.4 L2 A $_0 = 1, a_1 = 2, a_2 = 0$ 5 Define complete Graph (Kn) and how many edges are in K6. Part B (Long Answer Questions 5 x 12 = 60 Marks) No. Questions (6 through 15) Marks Caustions (6 through 15) Define contingency. Prove that $(\neg p \rightarrow \neg q) \Leftrightarrow (q \Leftrightarrow r)$ is contingency. 6 (b) Show that $(p \rightarrow q) \rightarrow q \Leftrightarrow p \lor q$ Without constructing the truthtable (i) Obtain the principal conjunctive normal form of $(\neg p \rightarrow r) \land (q \leftrightarrow p)$. (ii) Obtain the PDNF for $(P \land Q) \lor (\neg P \land R) \lor (Q \land R)$ For each of the sets of the premises, what relevant conclusion or conclusions can be drawn?Explain the rules of inference used to obtain each conclusion from the premises. What relevant conclusion and internet account.* Naggie has an Internet account.* 8 (a) R= $\{x,y > 1x,y$ is divisible by 3]. Show that R is an equivalence relation. 8 (b) Explain Hasse Diagram. Draw the Hasse Diagram of D _{2x} OR Define inverse of a function and find the inverse of $f(x) = \frac{x}{x} + \frac{x}$							70	Semester	1	III
No. Questions (1 through 5) Define Tautology and contradiction? Define subgroup Find the god of 615 and 1080, and find the integers x and y such that god(615, 1080) = 615x+1080y. Find the first 5 terms of the recurrence relation $a_n = a_{n-1} + a_{n-3}$, 20BSX16.1 L1 gods(515, 1080) = 615x+1080y. Find the first 5 terms of the recurrence relation $a_n = a_{n-1} + a_{n-3}$, 20BSX16.4 L2 and $a_0 = 1$, $a_1 = 2$, $a_2 = 0$ Define complete Graph (Kn) and how many edges are in K6. Part B (Long Answer Questions 5 x 12 = 60 Marks) No. Questions (6 through 15) Define contingency. Prove that $(\neg p \rightarrow \neg q) \Leftrightarrow (q \Leftrightarrow r)$ is contingency. From that $(\neg p \rightarrow \neg q) \Leftrightarrow (q \Leftrightarrow r)$ is contingency. Show that $(p \rightarrow q) \rightarrow q \Leftrightarrow p \lor q$ 6M 20BSX16.1 L2 Without constructing the truthlable OR Without constructing the truthlable OR Without constructing the truthlable OR Without constructing the pramises, what relevant conclusion or conclusions can be drawn?Explain the rules of inference used to obtain each conclusion from the premises. Every student has an internet account." Homer does not have an Internet account." Maggie has an Internet account." Define Equivalence relation.Let X=(1,2,3,.7) and R=(<x,y> 1 x y is divisible by 3). Show that R is an equivalence field on. 8(b) Explain Hasse Diagram. Draw the Hasse Diagram of D_{2x} 6M 20BSX16.2 L3 calculation. Explain Hasse Diagram. Draw the Hasse Diagram of D_{2x} 6M 20BSX16.2 L2 OR Define inverse of a function and find the inverse of f(x) = $\frac{3 \times 4}{5}$ for all x in R 6M 20BSX16.2 L2 OR Define inverse of a function and find the inverse of f(x) = $\frac{3 \times 4}{5}$ for all x in R 6M 20BSX16.3 L3 10 (a) State and prove Euter's theorem. Give an example 6M 20BSX16.3 L3 10 (b) and big then ajc for all a,b, c, (i) if ajb, then ajbc (ii) if ajb and big then ajc for all a,b, c integers OR 11 (a) State and prove Fermat's theorem Define G CD, LCM and co primes. Find the prime factorization of 243, 125.</x,y>	Cou	rse	watnematical Fo	undations for Co	omputer S	icience				
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Part B (Long Answer Questions 5 x 12 = 60 Marks) Show that $(p \rightarrow q) \rightarrow q \Leftrightarrow p \lor q$ (a) Show that $(p \rightarrow q) \rightarrow q \Leftrightarrow p \lor q$ (b) Obtain the PONF for $(P \land Q) \lor (\neg P \land R) \lor (Q \land R)$ For each of the Pore sets of the premises, what relevant conclusion or conclusions can be drawn ?Explain the relevant conclusion for the premises, "Expery student has an internet account." Define Equivalence relation. Let $X = \{1, 2, 3, 4, 5\}$ is not a group under addition and bic then alpic for all a, b, c, (i) if alb, and bic then alpic for all a, bc, ciningers Refine Substance of the Substance of the Fibon acci recurrence relation with 5 the prime factorization of GM 20BSX16.3 L1 20BSX16.1 L2 20BSX16.1 L2 20BSX16.1 L2 20BSX16.1 L2 20BSX16.1 L2 20BSX16.1 L3 20BSX16.1 L2 20BSX16.1 L2 20BSX16.1 L2 20BSX16.1 L2 20BSX16.1 L3 20BSX16.1 L2 20BSX16.1 L2 20BSX16.1 L3 20BSX16.1 L3 20BSX16.1 L3 20BSX16.1 L3 20BSX16.2 L3 20BSX16.2 L3 20BSX16.2 L3 20BSX16.2 L3 20BSX16.3 L3 20BSX										
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12 (b)	$F_0=\mathbf{b},F_1=1.$ Solve the recurrence relation $a_n=4a_{n-1}-4a_{n-2}$, for $n\ge 2$ with initial conditions $a_0=6$, and $a_1=8$.	6M	20BSX16.4	L2
13 (a)	Find the solution to the recurrence relation $a_n = 6a_{n-1} - 11a_{n-2} + 6a_{n-3}$, with the initial conditions $a_0 = 2$, $a_1 = 5$, $a_2 = 15$	6M	20BSX16.4	L2
13 (b)	Find all the solutions of the recurrence relation $a_n = 2a_{n-1} + 2n^2$.	6M	20BSX16.4	L3
14 (a)	Explain about the bipartite and complete bipartite Graphs with diagrams	6M	20BSX16.5	L3
14 (b)	Determine whether the following graphs are isomorphic or not.	6M	20BSX16.5	L2
	G1 G2 OR			
15 (a)	Define Hamiltonian graph and draw a graph with six vertices which is Hamiltonian but not Eulerian?	6M	20BSX16.5	L2
15 (b)	Find minimal spanning tree using Kruskal's algorithm. Use a graph of your choice.	6M	20BSX16.5	L3

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Dept.:	Civil Engg. CSE ECE EEE ME BS &H
Organi	mic Year : 2021-22
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	Yes No. If yes, please rate it on a five-point scale4:(5: High to 1: Low)
7.	in general, how do you rate the quality and standard of questions?
AC 28	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

A el.

Semester End Examination, January/February, 2022

Degre		B. Tech. (U. G.)	Program	EEE & I		ny, zu	Academic Year	2021 -	2022
	e Code	20EC302	Test Duration	3 Hrs.	Max. Marks	70	Semester	I	It
Cours	е	Electronic Device	es and Circuits						
Part A	(Short Ar	nswer Questions 5:	x 2 = 10 Marks)						
No.	Questic	ons (1 through 5)					Learning Outo	ome (s)	DoK
1 2		meant by depletion					20EC302		L1
3		y two applications of TUF and what is the		En-			20EC302		L1
4	Why we	e call BJT as a curre	nt Controlled Device	ner -2			20EC302 20EC302		L1
5	List the	advantage and disa	dvantages of fixed t	bias metho	od		20EC302		L1 L1
	(Long An	swer Questions 5)	(12 = 60 Marks)				502000		
No.	Questic	ons (6 through 15)	45			Mark	s Learning Outo	ome (s)	DoK
6 (a)	diode ir	eat diagram explain forward and revers	ine principle and o	peration o	of P-N junction	8M	20EC302	20EC302.1	
	Calcula	ite the forward bias	current of a Si di	iode wher	forward bias				L2
6 (b)	voltage	of 0.4V is applied, t	he reverse saturation	on current	is 1.17×10-9A	4M	20EC302.1		L2
	and the	thermal voltage is 2	5.2mV.						
7 (a)	Darive I	the expression for Di	iffusion conneitence	OR		74.4			
7 (b)	What is	the effect of temper	ature on P-N iunctic	or a cloce	3	7M 5M			1.2
			ature on restriction	on Glode:		SIVI	20EC302	(L2
8 (a)	Explain	the working of Zend	er diode in reverse	bias cond	ition with neat	6M	2050200		
8 (b)	diagram		odelice contri pos	76					L2
0 (0)	AAIGH GIG	e help of V-I characte	enstics, explain SCF	d operation OR	n.	6M	20EC302	2.2	L2
	A sinus	oidal voltage whose	Vm=12V is applie	ed to half-	wave rectifier.				
9 (a)	The dio	de may be consider	ed to be ideal and I	RL=1.5 KC	is connected	6M	20EC302		1.0
` '	as load	Find out peak valid current and Ripple	ue of current, RM:	S value o	f Current, DC	DIVI	2050302	2	L2
0.43	Derive	the expression for F	iacior. Rinnle factor for Eu	II Wave E	Pactifier with I				
9 (b)	filter.		apple factor for ra	ii vvave t	COUNCY WILL L	6M	20EC302	1.2	L3
10 (a)	Evoluio	the energies of NED	Al Tanadata a until				_		
10 (b)	Write th	the operation of NPI e differences between	A Fransistor With he	eat diagran	1 tions	5M			L2
(-)		o dinordinoco octilec	ob, ob, and co	OR	liulis	7M	20EC302	3	L2
11 (a)		he relation between				5M	20EC302	.3	L2
11 (b)	Sketch	a family of CE out	out characteristics	for a trans	sistor. Explain	7M			
. ,	cutoff, a	ctive, saturation regi	ion			7 171	20EC302	.3	L2
12 (a)	Obtain a	an expression of stat	nility factor for fixed	hise		5M	2050202		
12 (b)	Distingu	ish Thermal runawa	y and Thermal stab	ility		7M			L2 L2
				OR		, ,,,	2020002		L2
13 (a)	With sui	table expressions ex	plain self bias of B.	JŤ		6M		.4	L2
13 (b)	Explain	about Thermistor an	d Sensistor bias co.	mpensatio	n techniques	6M	20EC302	.4	L2
14 (a)	Draw th	e hybrid parameter	equivalent circuit	for an N	PN common				
	emitter t	ransistor and explain	1.			8M	20EC302	.5	L3
14 (b)	Explain	the construction and	d working of Enhand		DSFET.	4M	20EC302	.5	L2
15 (a)	With nes	at sketch, discuss ab	Sout common on	OR	11600	41.4	2000		
	Draw the	e hybrid parameter	equivalent circuit	for PNP o	ommon base	4M	20EC302	.5	L3
15 (b)	transisto	r and explain.	- garraiont onout	IN LINE C	ommon base	M8	20EC302	.5	L3

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AC 23	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

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	Semester End Examination, February	, 2022	L	N2KI
Deg	ree B. Tech. (U. G.) Program CSE, CSE (AI & ML) & C		Anadoust se	
Соц	rse Code 20CS304 Test Duration 3 Hrs. Max. Mark			2021 - 2022
Cou	rse Object Oriented Programming through C++	10 IU	Semester	111
Part	A (Short Answer Questions 5 x 2 = 10 Marks)			
No	Questions (1 through 5)			
1	Write C++ code that reads two numbers from user and prints their s		Learning Outcome	• •
2	Define an anonymous object.	um,	20CS304.1	L2
3	List any two advantages of Inheritance		20CS304.2 20CS304.3	L1
4 5	What is a pure virtual function?		20CS304.4	L1 L1
	What is a list in C++ STL? B (Long Answer Questions 5 x 12 = 60 Marks)		20CS304.5	L1
No.	Questions (6 through 15)			
6 (a	Explain the key concepts of Object-Oriented Programming	Marks	Leaming Outcome	(s) DoK
6 (b)	Define recursion. Explain with a suitable example.	6M 6M	20CS304.1	L1
	UB	OIVI	20CS304.1	L2
7 (a)	Write a C++ program demonstrating the viability of new and delete	71.4		
7 (b)	operators for a strictle variable as well as an array	7M	20CS304.1	L1
. (0)	Explain the manipulators with suitable examples.	5M	20CS304.1	L2
8 (a)	How to define a class in C++? How to declare objects for the			
0 (a)	Cidada Cilve dil exallible.	6M	20CS304.2	L2
8 (b)	Write a program for calculating the total marks and Grade of the 60			
	Stadenta III a class.	6M	20CS304.2	L1
	Explain the visibility of base class members for the access			
9 (a)	specimers, private, protected, and nublic while creating the desired	Chi		
	class and expiding the SVII(ax for creation derived class	6M	20CS304.2	L2
9 (b)	write a C++ program to exchange the values between two classes			
	using friend functions.	6M	20CS304.2	L3
40.7-1	Explain about default and parameterized assets at the second			
10 (a)	Explain about default and parameterized constructors with suitable examples.	6M	20CS304.3	L1
10 (b)	Write a C++ program to define three overloaded functions to swap		4550001.0	
(4)	two integers, swap two floats and swap two doubles.	6M	20CS304.3	L3
11 (a)	OP			
	State any two forms of inheritance. Give an example of each.	6M	20CS304.3	L1
11 (b)	Explain the syntax for passing arguments to base class constructors in multiple inheritances.	6M	20CS304.3	L3
	The information of the control of th	5.11	2000004.0	LO
12 (a)	How this pointer declared in C++?	4M	2000204.4	
12 (b)	Explain Static Binding and Dynamic Binding.	8M	20CS304.4 20CS304.4	L1
13 (a)	OP	OIII	2003304.4	L2
13 (b)	What is a Virtual Function? Explain with an example.	6M	20CS304.4	L1
(0)	Explain the Exception Handling mechanism.	6M	20CS304.4	L2
14 (a)	Write the difference between Templates and Macros.	C1.4		
14(b)	Write a program to swap two variables using a function template.	6M 6M	20CS304.5	L2
	OB.	6M	20CS304.5	Ł3
15	Explain briefly the three foundational items of standard template	400		
	library.	12M	20CS304.5	L2

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Dept.:	Civil Engg. CSE ECE EEE ME BS &H
ALBaur	nic Year 2021-22 ter
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/(C /2):	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

Commendable Excellent

Good Satisfactory

8. General Remarks

Signature







Degree	B. Tech. (U. G.)	Program	Commo	n to All		Academic Year	2021-2022	
Course Code	20BSX12	Test Duration	3 Hrs.	Max. Marks	70	Semester	11	
Course	PARTIAL DIFFERENTIAL EQUATIONS AND VECTOR CALCULAS							

Part A ((Short Answer Questions 5 x 2 = 10 Marks)			
No.	Questions (1 through 5)		Learning Outcome (s)	DoK
1	Form the PDE by eliminating arbitrary constants a and b from $z = ax + by + ab$		20BSX12.1	L1
2	Solve $(D-D^1-2)(D-D^1+1)z=0$.		20BSX12.2	L2
3	Compute $\Gamma(4.5)$		20BSX12.3	L2
4	Find div \bar{r} and curl \bar{r}		20BSX12.4	L1
5	Write the Statement of Stoke's Theorem		20BSX12.5	L1
Part R (Long Answer Questions 5 x 12 = 60 Marks)			
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK
	Form PDE by eliminating " f" from			
6 (a)	$z = (x+y)f(x^2 - y^2)$	6M	20BSX12.1	L2
6 (b)	Solve $y^2p - xy q = x (z - 2y)$	6M	20BSX12.1	L3
	OR			
7 (a)	Solve $(\frac{p}{2} + x)^2 + (\frac{q}{2} + y)^2 = 1$	8M	20BSX12.1	L3
7 (b)	Solve $z = px + qy + \sqrt{p^2 + q^2 + 1}$	4M	20BSX12.1	L2
8 (a)	Solve($D^2 - DD'$)z = $\sin x \cos 2y$.	6M	20BSX12.2	L3
8 (b)	Solve $(D^2 - DD' + D' - 1)z = Cos(x + 2y)$	6M	20BSX12.2	L2
	OR	OW		
9 (a)	(D + D' - 1)(D + 2D' - 3)z = 4 + 3x + 6y	6M	20BSX12.2	L2
9 (b)	Solve $y^3 \frac{\partial z}{\partial x} + x^2 \frac{\partial z}{\partial y} = 0$ by the method of separation variables	6M	20BSX12.2	L3
40 (-)	$\frac{\pi}{2}$ $\frac{\pi}{2}$ $\frac{\pi}{2}$ $\frac{\pi}{2}$ $\frac{\pi}{2}$			
10 (a)	Prove that $\int_0^{\frac{\pi}{2}} \sqrt{\cot \theta} \ d\theta = \frac{1}{2} \Gamma(\frac{1}{4}) \Gamma(\frac{3}{4})$	6M	20BSX12.3	L3
10 (b)	Evaluate $\int_0^1 \int_0^1 \int_0^1 e^{x+y+z} dxdydz$	6M	20BSX12.3	L2
	Prove that $\beta(m,n) = \int_0^\infty \frac{x^{m-1}}{(1+x)^{m+n}} dx = \int_0^\infty \frac{x^{n-1}}{(1+x)^{n-1}} dx.$	6M	20BSX12.3	L3
11 (b)	Evaluate $\int_{0}^{1} \int_{0}^{\sqrt{1+y^2}} \frac{dx dy}{1+x^2+y^2}$	6M	20BSX12.3	L2

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		4		
	Find the Directional Derivative of the function			
12 (a)	$f = x^2 - y^2 + 2z^2$ at the point P= (1, 2, 3) in the direction of	6M	20BSX12.4	L3
	the line \overline{PQ} where Q=(5,0,4).			
12 (b)	Show that $(x^2 - yz) \overline{\iota} + (y^2 - zx) \overline{\jmath} + (z^2 - xy) \overline{k}$ is irrotational and hence find scalar potential	6M	20BSX12.4	L3
	OR			
13 (a)	If $\vec{F} = grad(x^3 + y^3 + z^3 - 3xyz)$ Find div \vec{F} and curl \vec{F}	6M	20BSX12.4	L3
. ,	Prove that $\nabla^2 f(r) = f''(r) + \frac{2}{r} f'(r)$.	6M	20BSX12.4	L2
14	Verify Green's theorem for $\int_c [xy + y^2]dx + x^2 dy$], where	12M	20BSX12.5	L3
	C is bounded by $y = x$ and $y = x^2$			
	Verify Gauss divergence theorem for			
	$\bar{F} = (x^2 - yz)\bar{\imath} + (y^2 - zx)\bar{\jmath} + (z^2 - xy)\bar{k}$ taken over the	100	20BSX12.5	L3
15	rectangle parallelepiped bounded by $0 \le x \le a$, $0 \le y \le b$, $0 \le z$	12M	ZUDOATZ.J	20
	≤ C.			

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Organiz	nic Year : 20 21 - 22
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14(3)25	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

Commendable Excellent

Satisfactory Good

8. General Remarks



Degree	B. Tech. (U. G.)	Program	Commo	on to EEE/ECE		Academic Year	2021 - 2022	
Course Code	20ESX01	Test Duration	3 Hrs.	Max. Marks	70	Semester	11	
Course	ENGINEERING D	PRAWING						

Part A (S	hort Answer Questions 2 x 5 = 10 Marks)			
No.	Questions (1 through 2)		Learning Outcome (s)	DoK
1	Construct a scale to measure up to 60 m if 1cm represents 5 m, find and mark a distance 37 m on it	its RF	20ESX01.2	L1
2	Draw a pentagon of side 40 mm		20ESX01.4	L3
Part B (L	ong Answer Questions 5 x 12 = 60 Marks)			
No.	Questions (3 through 12)	Marks	Learning Outcome (s)	DoK
3 (a)	Draw a hyperbola having its two asymptotes passing through a			2011
	point P at a distance of 36 mm from one asymptote and 30 mm from the other. Draw a normal and tangent at any convenient point	6M	20ESX01,1	L2
3 (b)	Construct a hexagon of side 35 mm by using general method	6M	20ESX01.1	L3
4 (a)	Draw the major axis of an ellipse is 100 mm long and the foci are at a distance of 16 mm from its ends. Draw the ellipse by concentric circles method	6M	20ESX01.1	L3
4 (b)	A 5 cm long line on map represents 1.5 metre length. Determine the	6M	20ESX01.1	L2
	RF and draw a scale long enough to measure up to 6 meters. Show a distance of 4.8 metres on it			
	A 75 mm long line PQ is inclined at 20° to the HP. The end P is 15			
5 (a)	mm in front of the VP and 20 mm above the HP. Draw its projections	4M	20ESX01.2	L3
5 (b)	A line AB 75 mm long is inclined at 35° to the HP and 20° to VP. Its end A is in the HP and 45 mm in front of the VP. Draw its projections and determine traces	8M	20ESX01.2	L3
	OR			
6 (a)	Draw the following projection of points: I. A, 40 mm above HP and 30 mm in front of VP II. B, 30 mm above HP and 40 mm behind VP III. C, 25 mm below HP and 20 mm behind VP IV. D, is on both HP and VP	4M	20ESX01.2	L2
	A 60 mm line AB, has an end P at 25 mm above the HP and 30 mm			
6 (b)	in front of VP. The line is inclined at 50° to HP and 40° to VP. Draw its projections	8M	20ESX01.2	L2
= =				
7 (a)	Draw the projections of a regular pentagon of 40 mm side, having one of its sides in the HP and its surface making an angle of 45° with the HP	6M	20ESX01.3	L2
7 (b)	Draw the projections of a circular lamina of 40 mm diameter having one of its sides in the VP and inclined at 30° to the VP	6M	20ESX01.3	L3
	OR	•	6060110110	
8 (a)	Draw the projections of a 60° set square of 40 mm side and longer edge 100 mm one of its sides in the HP and its surface making an angle of 45° with the HP	6M	20ESX01.3	L2

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8 (b)	Draw the projections of a regular hexagon of 40 mm side, having one of its sides in the HP and inclined at 60° to the V.P and its surface making an angle of 45° with the H.P	6M	20ESX01.3	L3
9 (a)	A square prism, side of base 30 mm and axis 50 mm long, has its axis inclined at 60° to HP its has an edge of its base in the HP and inclined at 45° to VP. Draw the projections	6M	20ESX01.4	L2
9 (b)	Draw the projection of a cone, base 70 mm diameter and axis 110 mm long, lying on HP. on one of its generators with axis parallel to the V.P	6M	20ESX01.4	L3
	OR			
10 (a)	A square prism, side of base 30 mm and axis 40 mm long, has its axis inclined at 60° to HP its has an edge of its base in the H.P and inclined at 45° to VP. Draw the projections	6M	20ESX01.4	L2
10 (b)	Draw the projections of a cone, base 75 mm diameter and axis 130 mm long, lying on the ground on one of its generators with the axis parallel to the VP	6M	20ESX01.4	L3
*	Draw top, front and side views of the isometric projection given in the figure			
11		12M	20ESX01.5	L4
	O R			
40	Draw an isometric view of a square prism having a base with a 45 mm side and a 65 mm long axis, resting on the HP. a) on its base			
12	with axis perpendicular to the HP, b) on its rectangular faces with axis perpendicular to the VP and c) on its rectangular face with axis parallel to the VP	12M	20ESX01.5	L4

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Dept.: (Civil Engg. CSE ECE EEE ME BS &H
Name of Organización Acader Semes Curse	
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study? Yes No. If yes, please rate it on a five-point scale
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity? Yes No. If yes, please rate it on a five-point scale
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4.	Po you observe any of the questions that has less scope to assess the intended knowledge and skill? Yes No. If yes, please rate it on a five-point scale
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills? Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time? Yes No. If yes, please rate it on a five-point scale
7.	In general, how do you rate the quality and standard of questions?
ACZ	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

Commendable Excellent

Good Satisfactory

8. General Remarks

Signature



Degree	B. Tech. (U. G.)	Program	ECE			Academic Year	2021 - 2022
Course Code	20BSX23	Test Duration	3 Hrs.	Max. Marks	70	Semester	l1
Course	Applied Chemist	try					

Part A (S	hort Answer Questions 5 x 2 = 10 Marks)			
No.	Questions (1 through 5)	-	Learning Outcome (s)	DoK
1	Define stereo regular polymer		20BSX23.1	L1
2	What is the concept of galvanic cell?		20BSX23,2	L1
3	Differentiate atomic orbital and molecular orbital.		20BSX23,3	L2
4	What is absorption spectrum?		20BSX23.4	L1
5	Write the concept of supramolecular system.		20BSX23.5	L1
Part B (L	ong Answer Questions 5 x 12 = 60 Marks)			
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK
6 (a)	Explain the preparation, properties and applications of Nylon-6,6	6M	20BSX23.1	L2
6 (b)	Differentiate between addition and condensation polymerization	6M	20BSX23.1	L2
	OR			
7 (a)	Describe the preparation, properties and applications of urea	5M	20BSX23.1	L2
	formaldehyde.			
	Explain the conduction mechanism and applications of			
7 (b)	polyacetylene and polypyrrole	7M	20BSX23.1	L2
8 (a)	What is Calomel? Explain the construction & working of lead -	5M	20BSX23.2	L2
0 (a)	acid battery	OIVI	2000/20,2	LZ
	Define conductometry. Discuss conductometric titration of			
8 (b)	strong acid vs weak base	7M	20BSX23.2	L2
	OR			
9 (a)	What is the concept of potentiometry? Discuss the applications	6M	20BSX23.2	L2
. ,	of potentiometric titrations			
9 (b)	What is fuel cell? Explain construction and working of	6M	20BSX23.2	L2
	Hydrogen-Oxygen fuel cell			
10 (a)	What is bond order? Explain the molecular orbital energy level diagram of carbon monoxide molecule	7M	20BSX23.3	L2
10.75	Discuss the structure and geometry of methane and ethane	5M	20BSX23.3	L2
10 (b)	OR	DIVI	2003/23.3	LZ
11 (a)	Explain the salient features of crystal field splitting in	7M	20BSX23.3	L2
11 (a)	octahedral and tetrahedral complexes	7 191	2000/20.0	L2
11 (b)	Write brief account on band theory of solids with the band	5M	20BSX23.3	L2
(5)	diagrams		2000/120.0	
	THE STATE OF THE S			
12 (a)	Explain the principle and applications of UV-visible	5M	20BSX23.4	L2
()	spectroscopy.		M Se	
12 (b)	Discuss principle and instrumentation of 1H-NMR	7M	20BSX23.4	L2
	spectroscopy.			
	OD.			

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13 (a)	Explain the principle and method of Gas Chromatography (GC) in the separation of gaseous and liquid mixtures	6M	20BSX23.4	L2
13 (b)	Discuss the applications of pH-metry and conductometry	6M	20BSX23.4	L2
14 (a)	Define supermolecular. Explain the synthesis of rotaxene	5M	20BSX23.5	L1
14 (b)	Explain the template synthesis of catenands	7M	20BSX23.5	L2
	OR			
15 (a)	Discuss the concept of supramolecular reactivity and catalysis	4M	20BSX23.5	L1
15 (b)	Write a note on: (i) molecular switches and (ii) Quantum Light Emitting Diodes (QLED)	8M	20BSX23.5	L2

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The Vision of the Institute

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- To develop the students into outstanding professionals through innovative Teaching-Learning process.
- To uphold research through long term Academia-Industry interaction.
- To inculcate ethical standards and moral values.

Dept.: (Civil Engg. CSE ECE EEE ME BS &H		1	· · · · · · · · · · · · · · · · · · ·
Organia	mic Year : 21-22 ster : T-TT	Designation	Arsid-land	ProJesso
1.	Are the questions being relevant to the assessmen mastery of the learners on that course of study?	t of Course Outo	omes as well as to unde	rstand the
	Yes No. If yes, please rate it on a five-point scale _	4	(5: High to 1: Low)	
2.	Are the questions being very clear in easily understa	ındable language	without any sort of ambi	guity?
	Yes No. If yes, please rate it on a five-point scale _	Ч	(5: High to 1: Low)	
3.	Are the questions being crisp and concise and om question response time?	its irrelevant info	rmation that reduces the	students'
	Yes No. If yes, please rate it on a five-point scale _	4	(5: High to 1: Low)	
4.	Do you observe any of the questions that has less s	cope to assess th	ne intended knowledge a	nd skill?
	Yes No. If yes, please rate it on a five-point scale _	4	(5: High to 1: Low)	
5.	Are the questions being addressing appropriate co that facilitates critical thinking and problem-solving s	gnitive levels of kills?	Revised Bloom's Taxono	my (RBT)
	Yes No. If yes, please rate it on a five-point scale	2	(5: High to 1: Low)	
6.	Are the questions being single dimensional avoiding	multiple ideas to	evaluate one response	at a time?
	Yes No. If yes, please rate it on a five-point scale _	4	(5: High to 1: Low)	
7.	In general, how do you rate the quality and standard	of questions?		
ACE	Form No. AC 23. 00.2021 N S Raju Institute of T	echnology, Sonty	ram, Vizag, Andhra Prade	esh

Commendable Excellent

Good Satisfactory

8. General Remarks

Signature



Degre		B. Tech. (U. G.)	Program	CE/ME	E/CSE/CSM/0	CSD	Academic Year	2020 -	2021
	e Code	20ESX05	Test Duration			70	Semester		II .
Cours	е	Basic Electrical	and Electronics	s Engineerir	ng				
Part A	(Short A	nswer Questions	5 x 2 = 10 Mark	s)					
No.		ns (1 through 5) nm's law					Learning Outcor		DoK
2		e torque-speed cha	racteristics of se	eparately exc	ited D.C. mote	ors	20ESX05,1 20ESX05,2		L2 L1
3	Mention	the applications of	an alternator				20ESX05.3	}	L1
4 5		ing of the transform e circuit diagram of				- 46	20ESX05.4 20ESX05.5		L2 L1
Dowl D							2020/100.1		
No.		nswer Questions : ons (6 through 15)	x 12 = 60 Mar	ks)		Marks	Learning Outcor	ne (s)	DoK
6 (a)	Find th	e impedance of se	ries R-L-C circu	it with R=10	0Ω, X _L =50Ω	6M	20ESX05.	` '	L3
, ,	and X ₀ Calcula	;=200 ate: i) The admitt	ance Y ii) Th	e conducta	ace G and	-177	1020/100/		
6 (b)	consist	ting of a resistor of	10 Ω in series v	vith an induc	tor of 0.3 H,	6M	20ESX05.	l	L3
	whent	he frequency is 50 l	nz. In the above	OR					
	For th	e arrangement st	nown in Fig.7((a) below f	ind: i) The			+22	
	4.5 µF	lent capacitance of capacitor		ii) The Volta	ge across a				
7 (0)		4.5 uF 4.5	ևF 4.5 μF	3PF					
7 (a)	Г	145	tue	-ii-		6M	20ESX05.	1	L3
			11					40	
	L.		500 V		Fig.7(a)		120		
			\wedge		3 (-)				
		5 Ohm Z	2	2 Olun					
		7		~					
			3 Ohm						
7 (b)						6M	20ESX05.	1	L3
			Flg.7(b)						
	0								
	Conve	rt the given delta cir	cuit to star						
8	Explain	n principle of operat	ion and constru	ction of DC o	generator	12M	20ESX05.	2	L2
9 (a)		the operation of 3-				6M	20ESX05.	2	L2
9 (b)	Explair	about Swinburne's	test. What is it	ts significand	e?	6M	20ESX05.		L2
10	A 3-phas	se star connected a a field current of 5	alternator is rate 0 amp gives th	ed at 100 kV. ne full load (A. On short- current. The	12M	20ESX05.	3	L3

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	e.m.f. generated on open circuit with the same field current is 1575 V/phase. Calculate the voltage regulation at (a) 0.8 power factor lagging, and (b) 0.8 power factor leading by synchronous impedance method. Assume armature resistance is 1.5 Ω $$ OR			
11 (a)	Explain principle of Operation of 3-Ф induction motor with neal sketches	O.V.	20ESX05.3	L2
11(b)	Explain Speed-Torque Characteristics of 3- Φ induction Motor with neat sketches	6M	20ESX05.3	L2
12(a)	With the help of diagram explain the principle of operation of transformer		20ESX05.4	L2
12(b)	Determine the efficiency of a single phase 150 KVA transforme at 50% full load and 0.8 power factor lag if the copper loss at ful load is 1600 watts and iron loss is 1400 watts OR	r II 6M	20ESX05.4	L3
13	Explain the procedure for conducting OC and SC test of a transformer and mention which type of losses can be determined by these tests	a d 12M	20ESX05.4	L2
14 (a)	Explain characteristics of a Zener diode both in forward and revere bias	0,,,	20ESX05.5	L2
14(b)	Draw the circuit diagram of half wave rectifier and explain it operation	s 6M	20ESX05,5	L2
15(a)	Explain the working of an OP-AMP Integrator with the aid of	a _{6M}	20ESX05.5	L2
15(b)	neat sketch List out the parameters of ideal and practical OP-AMP	6M	20ESX05.5	L1

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Dept.:	Dept.: Civil Engg.	CSE CSE (AI & ML)	CSE (DS) ECE EE	E ME BS&H
Organi	zation mic Year ster	:DR T Vinay Kumar : NIT Warangal :2020-21 : II : Network Analysis and		ion: Assista	nt Professor
1.	Are the questions mastery of the lea	s being relevant to the ass arners on that course of stu	essment of	Course Out	comes as well as to understand the
	Yes No. If yes, p	lease rate it on a five-point	t scale	5	_ (5: High to 1: Low)
2.	Are the questions	being very clear in easily	understand	able languag	e without any sort of ambiguity?
	Yes No. If yes, p	lease rate it on a five-point	t scale	4.5	(5: High to 1: Low)
3.	Are the questions question response	s being crisp and concise time?	and omits	irrelevant info	ormation that reduces the students'
	Yes No. If yes, p	lease rate it on a five-point	scale	4	_ (5: High to 1: Low)
4.	Do you observe a	ny of the questions that ha	s less scop	e to assess t	he intended knowledge and skill?
	Yes No. If yes, p	lease rate it on a five-point	scale	4.5	(5: High to 1: Low)
5.	Are the questions that facilitates criti	being addressing approp cal thinking and problem-s	riate cognil olving skills	ive levels of	Revised Bloom's Taxonomy (RBT)
	Yes No. If yes, p	lease rate it on a five-point	scale	4.5	(5: High to 1: Low)
6.	Are the questions	being single dimensional a	ivoiding mu	ıltiple ideas to	evaluate one response at a time?
	Yes No. If yes, pl	lease rate it on a five-point	scale	_4.5	(5: High to 1: Low)
7.	In general, how do	you rate the quality and s	tandard of	questions?	

Commendable Excellent

Good Satisfactory

8. General Remarks

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Signature



Degree	B. Tech. (U. G.) Program	CSE/CS	SM/CSD	A	cademic Year	2021 - 20	022
Course		Test Duration	3 Hrs.	Max. Marks	70 Se	emester	IL	
Course	Data Structure	es using 'C'						
Doet A (Short Annual Overtice	5 ·· 0 = 40 38l\						
No.	Short Answer Question Questions (1 through 5					Learning Out	come (s)	DoK
1	Define Abstract Data T					20CS20		L1
2	Define Single Linked L		l List			20CS20		L1
3	List any two application					20CS20		L1
4 5	State the properties of					20CS20		L1
	What is Spanning Tree Long Answer Question					20CS20	11.5	L1
No.	Questions (6 through 1				Marks	Learning Out	come (s)	DoK
6 (a)	Explain the classification		with exam	ple	6	20CS20		L2
6 (b)	Explain the Time Comp	olexity and Space Con	nplexity		6	20CS20		L2
7 (-)	F		OR					
7 (a)	Explain algorithm for L			t the following	4	20CS20)1.1	L2
7 (b)	Write the selection so elements 50, 12, 84, 5	8, 26, 8, 11	/ It to son	t the following	8	20CS20)1.1	L3
8 (a)	Explain the representa				4	20CS20	01.2	L2
8 (b)	Explain with an algorith Linked List	nm to insert and delete	e element	s using Single	8	20CS20)1.2	L2
5 ()			OR					
9 (a)	Explain the application				6	20CS20		L2
9 (b)	Explain Sparse Matrix	Representation using	Linked Lis	St	6	20CS20	J1.2	L2
10 (a)	Explain the Array repre		List repre	sentation	6	20CS20	01.3	L2
10 (b)	Explain the application	s of Stack			6	20CS20	01.3	L2
11 (a)	Write an algorithm to p	orform Circular Ougus	OR		6	20000	34.2	
	With a necessary algorithm					20CS20		L2
11 (b)	using arrays	The state of the s	piomonia	3011 01 44040	6	20CS20	01.3	L2
12 (a)	Explain the types of Tr	ee Traversal with eya	mnle		6	20CS20	11 <i>4</i>	L2
12 (b)	Explain the Binary Tree				6	20CS20		L2
			OR		_			
40	Construct a binary sea	rch tree by inserting 3	10, 10, 4,	19, 62, 35, 28,				
13	73 into an initially en nodes 4 and 62 one af	npty tree. Show the ter the other of the co	results of nstructed	f splaying the tree	12	20CS20	01.4	L3
14 (a)	Compare Breadth First	Search with Depth Fi	irst Seaml	h	6	20CS20	01.5	L2
14 (b)	Explain Depth First Se			•	6	20CS2		L2
		•	OR					
15	Explain Prim's and Kri tree with the sample gr				12	20CS2	01.5	L2

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Dept.:	Dept.: Civil Engg. CSE CSE (AI & ML) CSE (DS) ECE EEE ME BS & H
Organ	The state of the s
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	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
7.	In general, how do you rate the quality and standard of questions?
	Commendable Excellent Good Satisfactory
8.	General Remarks

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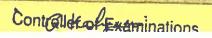


Semester End Supplementary Examination, October, 2021

Degree	NAME AND ADDRESS OF THE OWNER, THE PARTY OF	Program	Commo	on to All		Academic Year	2020 - 2021		
Course Code	20ESX02	Test Duration	3 Hrs.	Max. Marks	70	Semester	II.		
Course	PROGRAMMING FOR PROBLEM SOLVING USING 'C'								

2 Wr 3 De 4 Wr 5 Lis Part B (Lon No. Qu 6 (a) Wr 6 (b) Exp 7 (a) Exp 7 (b) Inp Exp 7 1 8 (a) Wr 1 (nte 8 (b) Des 9 (a) Wr 9 (b) Des 10 (a) Wr 10 (b) Wr 11 (c) Wr 12 (c) Wr 13 (c) Wr 14 (c) Wr 15 (c) Wr 16 (c) Wr 16 (c) Wr 17 (c) Wr 18 (d) Wr 18 (d) Wr 19 (d) Wr 19 (d) Wr 19 (d) Wr 10 (e) Wr 10 (e) Wr 10 (f) Wr 11 (f) Wr 12 (f) Wr 13 (f) Wr 14 (f) Wr 15 (f) Wr 16 (f) Wr 16 (f) Wr 16 (f) Wr 17 (f) Wr 18 (fine Algorithm ite the syntax of switch statement in C fine an array and give an example tat are Preprocessor directives? Give examples t various text file opening modes g Answer Questions 5 x 12 = 60 Marks) testions (6 through 15) te the algorithm and corresponding flowchart to find the given inber is Prime number or not total all the data types with their ranges, examples OR total different categories of operators and their precedence te a program in C to find the prime numbers within a range of inbers. Sample Input/ Output: test starting number of range: 1 tending number of range: 50 tected Output: The prime number between 1 and 50 are: 2 3 5 1 13 17 19 23 29 31 37 41 43 47 te a program in C to display the multiplication table of a given ger toribe the loop control statements in C OR te a program to display week days for a given digit (1-7) using tech case	Marks 6M 6M 8M 4M	Learning Outcome (s) 20ESX02.1 20ESX02.2 20ESX02.3 20ESX02.4 20ESX02.5 Learning Outcome (s) 20ESX02.1 20ESX02.1 20ESX02.1 20ESX02.2	DoK L1 L1 L1 L1 L1 L1 L2 L2 L2
3 De 4 Wh 5 Lis Part B (Lon No. Qu 6 (a) Writ nur 6 (b) Exp 7 (a) Exp Wrin nur 7 (b) Inp Exp 7 1 8 (a) Writ inte 8 (b) Des 9 (a) Writ Swi 9 (b) Des 10 (a) Writ func 10 (b) Writ	fine an array and give an example sat are Preprocessor directives? Give examples to various text file opening modes g Answer Questions 5 x 12 = 60 Marks) estions (6 through 15) the the algorithm and corresponding flowchart to find the given on the intermediate in Prime number or not obtain all the data types with their ranges, examples OR OR Olain different categories of operators and their precedence the a program in C to find the prime numbers within a range of onbers. Sample Input/ Output: Let ending number of range: 1 Let ending number of range: 50 letted Output: The prime number between 1 and 50 are: 2 3 5 in 13 17 19 23 29 31 37 41 43 47 Let a program in C to display the multiplication table of a given ger letter of the loop control statements in C OR o	6M 6M 8M 4M	20ESX02.2 20ESX02.3 20ESX02.4 20ESX02.5 Learning Outcome (s) 20ESX02.1 20ESX02.1 20ESX02.1	L1 L1 L1 L1 DoK L3 L2 L2
3 De 4 Wh 5 Lis Part B (Lon No. Qu 6 (a) Wh 7 (a) Exp Wh 7 (b) Inp Inp Exp 7 1 8 (a) Wh inte 8 (b) Des 9 (a) Wh 9 (b) Des 10 (a) Wh Inc	fine an array and give an example sat are Preprocessor directives? Give examples to various text file opening modes g Answer Questions 5 x 12 = 60 Marks) estions (6 through 15) the the algorithm and corresponding flowchart to find the given on the intermediate in Prime number or not obtain all the data types with their ranges, examples OR OR Olain different categories of operators and their precedence the a program in C to find the prime numbers within a range of onbers. Sample Input/ Output: Let ending number of range: 1 Let ending number of range: 50 letted Output: The prime number between 1 and 50 are: 2 3 5 in 13 17 19 23 29 31 37 41 43 47 Let a program in C to display the multiplication table of a given ger letter of the loop control statements in C OR o	6M 6M 8M 4M	20ESX02.3 20ESX02.4 20ESX02.5 Learning Outcome (s) 20ESX02.1 20ESX02.1 20ESX02.2	DoK L3 L2 L2
Part B (Lon No. Qu 6 (a) Write 10 (b) Exp 7 (a) Exp 7 (b) Input 10 (b) Write 10 (b)	t various text file opening modes g Answer Questions 5 x 12 = 60 Marks) estions (6 through 15) te the algorithm and corresponding flowchart to find the given obtain all the data types with their ranges, examples OR obtain different categories of operators and their precedence te a program in C to find the prime numbers within a range of obtains. Sample Input/ Output: the starting number of range: 1 the ending number of range: 50 the ected Output: The prime number between 1 and 50 are: 2 3 5 1 13 17 19 23 29 31 37 41 43 47 The a program in C to display the multiplication table of a given the ger the starting number of range: 1 OR o	6M 6M 8M 4M	20ESX02.4 20ESX02.5 Learning Outcome (s) 20ESX02.1 20ESX02.1 20ESX02.2	DoK L3 L2 L2
Part B (Lon No. Que 6 (a) Write 10 (b) Exp 7 (a) Exp 7 (b) Input 10 (b) Pes 10 (a) Write 10 (b) Write 10 (c)	g Answer Questions 5 x 12 = 60 Marks) estions (6 through 15) ite the algorithm and corresponding flowchart to find the given inber is Prime number or not clain all the data types with their ranges, examples OR clain different categories of operators and their precedence ite a program in C to find the prime numbers within a range of inbers. Sample Input/ Output: cut starting number of range: 1 cut ending number of range: 50 rected Output: The prime number between 1 and 50 are: 2 3 5 indicated 13 17 19 23 29 31 37 41 43 47 ite a program in C to display the multiplication table of a given inger incribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using	6M 6M 8M 4M	20ESX02.5 Learning Outcome (s) 20ESX02.1 20ESX02.1 20ESX02.2	L1 DoK L3 L2 L2 L2
7 (a) Exp Write Roy Roy Write Roy	estions (6 through 15) Ite the algorithm and corresponding flowchart to find the given on the sprime number or not obtain all the data types with their ranges, examples OR Itelating a sprime number of operators and their precedence of the appropriate in C to find the prime numbers within a range of on the sprime number of range of operators. Sample Input/Output: It starting number of range: 1 It ending number of range: 50 It ending number of range: 50 Itelated Output: The prime number between 1 and 50 are: 2 3 5 operators and 13 17 19 23 29 31 37 41 43 47 Itelated a program in C to display the multiplication table of a given operators and their precedence of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime number of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime numbers within a range of operators. It is not sprime number of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime numbers within a range of operators. It is not sprime number of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime number of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime number of the sprime numbers within a range of the sprime numbe	6M 6M 8M 4M	Learning Outcome (s) 20ESX02.1 20ESX02.1 20ESX02.2	DoK L3 L2 L2
7 (a) Exp Write Roy Roy Write Roy	estions (6 through 15) Ite the algorithm and corresponding flowchart to find the given on the sprime number or not obtain all the data types with their ranges, examples OR Itelating a sprime number of operators and their precedence of the appropriate in C to find the prime numbers within a range of on the sprime number of range of operators. Sample Input/Output: It starting number of range: 1 It ending number of range: 50 It ending number of range: 50 Itelated Output: The prime number between 1 and 50 are: 2 3 5 operators and 13 17 19 23 29 31 37 41 43 47 Itelated a program in C to display the multiplication table of a given operators and their precedence of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime number of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime numbers within a range of operators. It is not sprime number of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime numbers within a range of operators. It is not sprime number of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime number of the sprime number between 1 and 50 are: 2 3 5 operators and their precedence of the sprime number of the sprime numbers within a range of the sprime numbe	6M 6M 8M 4M	20ESX02.1 20ESX02.1 20ESX02.2 20ESX02.2	L3 L2 L2
6 (a) Write function (b) Write function (c) Write f	the the algorithm and corresponding flowchart to find the given on the index is Prime number or not obtain all the data types with their ranges, examples OR OR Olain different categories of operators and their precedence the approgram in C to find the prime numbers within a range of onbers. Sample Input/Output: Let ending number of range: 1 Let ending number of range: 50 Dected Output: The prime number between 1 and 50 are: 2 3 5 1 13 17 19 23 29 31 37 41 43 47 Let a program in C to display the multiplication table of a given ger Corribe the loop control statements in C OR Let a program to display week days for a given digit (1-7) using the statements of the correction of the c	6M 6M 8M 4M	20ESX02.1 20ESX02.1 20ESX02.2 20ESX02.2	L3 L2 L2
7 (a) Exp Write Representation Repre	olain all the data types with their ranges, examples OR Is plain all the data types with their ranges, examples OR Is plain different categories of operators and their precedence the a program in C to find the prime numbers within a range of Inbers. Sample Input/ Output: In starting number of range: 1 In ending number of range: 50 In tending number of range: 50 In the prime number between 1 and 50 are: 2 3 5 In 13 17 19 23 29 31 37 41 43 47 It is a program in C to display the multiplication table of a given It is a program in C to display the multiplication table of a given It is a program to display week days for a given digit (1-7) using It is a program to display week days for a given digit (1-7) using	6M 8M 4M	20ESX02.1 20ESX02.1 20ESX02.2	L2 L2 L3
7 (a) Exp Writ nur 7 (b) Inp Inp Exp 7 1 8 (a) Writ inte 8 (b) Des 9 (a) Writ 9 (b) Des 10 (a) Writ func	olain different categories of operators and their precedence te a program in C to find the prime numbers within a range of inbers. Sample Input/ Output: ut starting number of range: 1 ut ending number of range: 50 sected Output: The prime number between 1 and 50 are: 2 3 5 1 13 17 19 23 29 31 37 41 43 47 te a program in C to display the multiplication table of a given ger cribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using	8M 4M	20ESX02.1 20ESX02.2 20ESX02.2	L2
7 (b) Input	plain different categories of operators and their precedence te a program in C to find the prime numbers within a range of inbers. Sample Input/ Output: ut starting number of range: 1 ut ending number of range: 50 sected Output: The prime number between 1 and 50 are: 2 3 5 1 13 17 19 23 29 31 37 41 43 47 te a program in C to display the multiplication table of a given ger scribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using	4M	20ESX02.1 20ESX02.2 20ESX02.2	L2
7 (b) Input	te a program in C to find the prime numbers within a range of obers. Sample Input/ Output: ut starting number of range: 1 ut ending number of range: 50 vected Output: The prime number between 1 and 50 are: 2 3 5 1 13 17 19 23 29 31 37 41 43 47 the a program in C to display the multiplication table of a given ger veribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using	4M	20ESX02.2	L3
7 (b) Input	te a program in C to find the prime numbers within a range of obers. Sample Input/ Output: ut starting number of range: 1 ut ending number of range: 50 vected Output: The prime number between 1 and 50 are: 2 3 5 1 13 17 19 23 29 31 37 41 43 47 the a program in C to display the multiplication table of a given ger veribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using	4M	20ESX02.2	L3
7 (b) Inplex	ut starting number of range: 1 ut ending number of range: 50 vected Output: The prime number between 1 and 50 are: 2 3 5 1 13 17 19 23 29 31 37 41 43 47 the a program in C to display the multiplication table of a given ger veribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using	4M	20ESX02.2	L3
8 (a) Writinte 8 (b) Des 9 (a) Writinte 9 (b) Des 10 (a) Writifund 10 (b) Writinte	ut ending number of range : 50 sected Output : The prime number between 1 and 50 are :2 3 5 1 13 17 19 23 29 31 37 41 43 47 te a program in C to display the multiplication table of a given ger scribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using	4M	20ESX02.2	
8 (a) Writinte 8 (b) Des 9 (a) Writinte 9 (b) Des 10 (a) Writinte 10 (b) Writinte	tected Output: The prime number between 1 and 50 are :2 3 5 1 13 17 19 23 29 31 37 41 43 47 The a program in C to display the multiplication table of a given ger cribe the loop control statements in C OR The a program to display week days for a given digit (1-7) using the control of the	4M	20ESX02.2	
8 (a) Writinte 8 (b) Des 9 (a) Writ Swit 9 (b) Des 10 (a) Writ func	te a program in C to display the multiplication table of a given ger cribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using			L2
9 (a) Writ Swi 9 (b) Des 10 (a) Writ func	ger cribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using			L2
9 (a) Writ Swi 9 (b) Des 10 (a) Writ func	ger cribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using			L2
9 (a) Writ 9 (b) Des 9 (b) Des 10 (a) Writ 10 (b) Writ	cribe the loop control statements in C OR e a program to display week days for a given digit (1-7) using	8M		-
9 (a) Writ Swi 9 (b) Des 10 (a) Writ func	OR e a program to display week days for a given digit (1-7) using	Olft	ZULUNUZ.Z	L3
9 (b) Des	e a program to display week days for a given digit (1-7) using			LJ
10 (a) Writ	ICH Case	6M	20ESX02.2	L3
10 (a) Write	cribe any three storage classes	6M	20ESX02.2	
10 (b) Writ		Olvi	2053/02.2	L1
10 (b) Writ	e C program that uses both recursive and non-recursive	014	I	
10 /ы - ^{үүгж}	wons to find the sum of n natural numbers	6M	20ESX02.3	L2
the	e C program to read a list of elements into an array and print reverse of the list.	6M	20ESX02.3	L2
	OR			
Wr	ite a program in C to check whether a number is a prime			
11 (a) 11ui	noer or not using the function. Example: Input a positive	4M	20ESX02.3	L2
nui	noer: 5 Expected Output: The number 5 is a prime number		2020/02.0	LZ
11 (b) Ex	plain built-in string handling functions	8M	20ESX02.3	L2
12 (0) 14/5				
12 (a) Wh	at are pointers? Describe pointer arithmetic with examples	6M	20ESX02,4	L2
12 (b) Exp	plain call by reference mechanism with an example program	6M	20ESX02.4	L2
	OR			
Col	mpare the differences between structure and union. Explain	71		
13 usa	ge of structure in terms of definition, declaration and	12M	20ESX02.4	L2

AC 45, 90, 2021 Question Paper for Eng Semester-Examination | Academic Regulation 2920



4473	Describe Ele handling functions	8M	20ESX02.5	L2
14 (a)	Describe file handling functions Write a C program to read a text file "sample.txt" and print the following. a) Substring of N characters from the position I b) Reverse order of substring of N characters produced in a	4M	20ESX02.5	L2
	OR			
15 (a)	Describe pre-processor directives	6M	20ESX02.5	L2
15 (b)	Write a program for adding two integers and display the sum by taking input through command line arguments	6M	20ESX02.5	L2

Controller of Examinations (A)
Visakinapatham

Preamble: This feedback form AC 23 is intended to receive feedback on the quality of questions to ensure that the intended learning outcomes in terms Knowledge, Understanding and Skill are assessed. Also this form helps us to improve the quality of the questions that appear in the assessment instrument.

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- To uphold research through long term Academia-Industry interaction.

•	To inculcate ethical standards and moral values.	
Dept.: 0	: Civil Engg. CSE ECE EEE ME BS &H	2
Organiz	emic Year : LET ester : 201-22	nation : Asst-Pool
1.	Are the questions being relevant to the assessment of Cours mastery of the learners on that course of study?	se Outcomes as well as to understand the
	Yes No. If yes, please rate it on a five-point scale5	(5: High to 1: Low)
2.	. Are the questions being very clear in easily understandable la	anguage without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale	5 (5: High to 1: Low)
3.	Are the questions being crisp and concise and omits irrelevel question response time?	vant information that reduces the students'
	Yes No. If yes, please rate it on a five-point scale	(5: High to 1: Low)
4.	. Do you observe any of the questions that has less scope to a	ssess the intended knowledge and skill?
	Yes No. If yes, please rate it on a five-point scale	(5: High to 1: Low)
5.	i. Are the questions being addressing appropriate cognitive le that facilitates critical thinking and problem-solving skills?	veis of Revised Bloom's Taxonomy (RBT)
	Yes No. If yes, please rate it on a five-point scale	(5: High to 1: Low)
6.	i. Are the questions being single dimensional avoiding multiple	ideas to evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale	(5: High to 1: Low)
7.	. In general, how do you rate the quality and standard of quest	ions?
4(30)	Form No. AC 23. 00.2021 N S Raju Institute of Technolog	y, Sontyam, Vizag, Andhra Pradesh

Commendable Excellent

Good Satisfactory

8. General Remarks

Stanature



Degree	B. Tech. (U. G.)	Program	ECE			Academic Year	2021 - 2022
Course Code	20EC201	Test Duration	3 Hrs.	Max. Marks	70	Semester	II
Course	Principles of Ele	ctronics & Commi	unication	Systems			

Part A	(Short Answer Questions 5 x 2 = 10 Marks)			
No.	Questions (1 through 5)		Learning Outcome (s)	DoK
1	Define Fermi level		20EC201.1	L1
2	What are the Requirements of an Ideal OP – Amplifier?		20EC201.1	L1
3	What is the need for modulation and list types of modulation?		20EC201.3	L1
4	Define Flattop Sampling		20EC201.4	Li
5	Define numerical aperture		20EC201.5	L1
Part B	(Long Answer Questions 5 x 12 = 60 Marks)			
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK
6 (a)	Describe the electrical properties of semiconductors	6M	20EC201.1	L1
6 (b)	State and explain the Ohm's and Kirchhoff's Laws with diagrams	6M	20EC201.1	L2
	OR			
7 (a)	Explain the drift and diffusion currents of a semiconductor	6M	20EC201.1	L2
7 (b)	Explain about mobility and conductivity in semiconductor	6M	20EC201.1	L2
()	materials	0111	2020201.1	1.2
0 (a)	Evoleia the beside asserting of DNL I'm to get the set to			
8 (a)	Explain the basic operation of PN diode and transistor	6M	20EC201.2	L2
8 (b)	Explain the operation of differential amplifier with diagram	6M	20EC201.2	L1
9 (a)	OR List and explain the characteristics of an ideal op-amp	CM	0050004.0	1.4
9 (b)	Explain basic idea of common mode gain and difference gain	6M 6M	20EC201.2 20EC201.2	L1 L2
5 (5)	Explain basic idea of common mode gain and difference gain	OIVI	2050201.2	LZ
10 (a)	Explain applications of AM	6M	20EC201.3	L1
10 (b)	Explain the elements of communication system	6M	20EC201.3	L2
	OR	OIN	20201.0	22
11 (a)	Compare analog, digital and discrete signals	6M	20EC201.3	L2
5	Explain frequency modulation with relevant expression and signal		20EC201.3	
11 (b)	diagram	6M		L1
12 (a)	Explain the principle and operation of pulse code modulation with	6M	20EC201.4	12
	block diagram			L2
12 (b)	With a neat sketch, explain the principle and operation of BASK	6M	20EC201.4	L2
	OR			
13 (a)	Explain the generation FSK with signal diagram	6M	20EC201.4	L2
13(b)	Explain about TDM with diagram	6M	20EC201.4	L2
14(a)	Draw and explain the working principle Wavelength Division	CM	2050204.5	1.0
17(2)	Multiplexing (WDM)	6M	20EC201.5	L2
14 (b)	Explain about LASER and LED optical transmitters	6M	20EC201.5	L2
	OR			
15(a)	Explain the working principle of a Cellular Telephone system with	CLE	0050004 5	1.0
13(a)	diagram	6M	20EC201.5	L2
15(b)	Explain GSM architecture	6M	20EC201.5	L2

Preamble: This feedback form AC 23 is intended to receive feedback on the quality of questions to ensure that the intended learning outcomes in terms Knowledge, Understanding and Skill are assessed. Also this form helps us to improve the quality of the questions that appear in the assessment instrument.

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•	To inculcate ethical standards and moral values.
Dept.: (Civil Engg. CSE ECE EEE ME BS &H
Organiz	nic Year 2021-22 ter 2021-22
1.	Are the questions being relevant to the assessment of Course Outcomes as well as to understand the mastery of the learners on that course of study?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
2.	Are the questions being very clear in easily understandable language without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
3.	Are the questions being crisp and concise and omits irrelevant information that reduces the students' question response time?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
4.	Do you observe any of the questions that has less scope to assess the intended knowledge and skill?
	Yes No. If yes, please rate it on a five-point scale (5: High to 1: Low)
5.	Are the questions being addressing appropriate cognitive levels of Revised Bloom's Taxonomy (RBT) that facilitates critical thinking and problem-solving skills?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
6.	Are the questions being single dimensional avoiding multiple ideas to evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale(5: High to 1: Low)
7.	in general, how do you rate the quality and standard of questions?
AC-2.	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

Commendable Excellent

Good Satisfactory

8. General Remarks

Signature



Degree	B. Tech. (U. G.)	Program	CE, EE	E & ME		Academic Year	2021 - 2022
Course Code	20ESX04	Test Duration	3 Hrs.	Max. Marks	70	Semester	II .
Course	ENGINEERING N	MECHANICS					

Part A (Short Answer Questions 5 x 2 = 10 Marks)

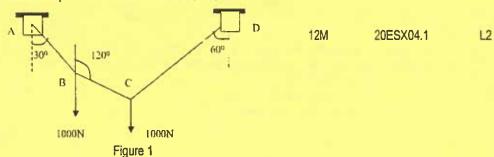
No.		Learning Outcome (s)	DoK
	Two forces of magnitude 50 kN and 80 kN are acting on a particle, such that		
1	the angle between the two is 135°. If both the forces are acting away from	20ESX04.1	L1
	the particle, calculate the resultant and find its direction		
2	Define coefficient of static friction	20ESX04.2	L1
3	State parallel axis theorem	20ESX04.3	L2
4	Differentiate between rectilinear and curvilinear motion	20ESX04.4	L1
5	Write impulse-momentum equation	20ESX04.5	L1

Part B (Long Answer Questions 5 x 12 = 60 Marks)

6

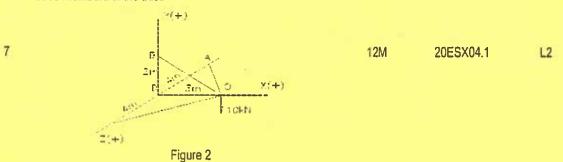
No. Questions (6 through 15)

A string ABCD, attached to two fixed points A and D has equal weights of 1000 N attached to it at B and C. The weights rest with the portions AB and CD inclined at angles 30° and 60° respectively, to the vertical as shown in Figure 1. Find the tension in the portions AB, BC and CD of the string, if the inclination of the portion BC with the vertical is 120°



OR

Members OA, OB and OC form a three-member space truss. A weight of 10 kN is suspended at the joint 'O' as shown in Figure 2. Determine the magnitude and nature of forces in each of the three members of the truss



Controller of Examinations

NSRIT (A)

Visakhanatnam

Determine the force in members DF, EF and EG of the truss shown in Figure 3

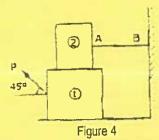
Figure 3

20ESX04.2 L3 12M

OR

Block (2) rests on block (1) and is attached by a horizontal rope AB to the wall as shown in Figure 4. What force P is necessary to cause motion of block (1) to impend? The co-efficient of friction between the blocks is 1/4 and between the floor and block (1) is 1/3. Mass of blocks (1) and (2) are 14 kg and 9 kg respectively.

9

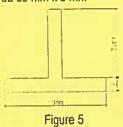


L2 20ESX04.2 12M

Determine the moment of inertia of the Tee section shown in Figure 5, about the horizontal and vertical centroidal axes with the following dimensions

- Flange 60 mm x 8 mm
- Web 50 mm x 8 mm

10



12M

12M

20ESX04.3

20ESX04.3

L3

L3

OR

Locate the centroid of the section shown in the Figure 6.

11

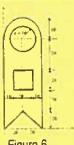
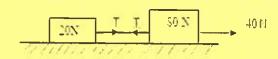


Figure 6

Controller of Examinations NSRIT (A)

Visakhapatnam

A train is travelling from A to D along the track shown in Figure 7. Its initial velocity at A is zero. The train takes 5 min to cover the distance AB, 2250 m length and 2.5 minutes to cover, the distance BC, 3000 m in length, on reaching the station C, the brakes are applied and the train stops 2250 m beyond, at D i. Find the retardation on CD, ii. the time it takes the train to get from A to D, and 12M 20ESX04.4 L3 its average speed for the whole distance. t_t=5Mm t= 25 mm ts = 2 2250m b 3000m 2250m Figure 7 OR A soldier fires a bullet at an angle of 30° (upward from the horizontal) from his position on hill to strike a target which is 61m lower than the position of the soldier. The initial velocity of the bullet is 91.5m/s. Calculate, 12M 20ESX04.4 L3 The maximum height to which the bullet will rise above İ. the horizontal ii. The actual velocity with which it will hit the target The total time required for the flight of the bullet A body weighing 300 N is pushed up a 30° plane by a 400 N force acting parallel to the plane. If the initial velocity of the body is 1.5 m/sec and coefficient of kinetic friction is $\mu = 0.2$, what 20ESX04.5 L3 velocity will the body have after moving 6 m? Use work-energy In a police investigation of tyre marks, it was concluded that a car while in motion along a straight level road skidded for a total of 60m after the brakes were applied. If the coefficient of friction 6M 20ESX04.4 L3 between the tyres and the pavement is estimated as 0.5, what was the probable speed of the car just before the brakes were applied? Use work-energy method. OR Two weights 80 N and 20 N are connected by a thread and move along a rough horizontal plane under the action of a force 40 N, applied to the first weight of 80 N as shown in Figure 8. The coefficient of friction between the sliding surfaces of the weight and the plane is 0.3. Determine the velocity of the system after 2 sec. Also calculate the tension in the string using impulse-momentum



12

13

15

equation.

Figure 8

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NSRIT (A)

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7 18 1 14

12M

20ESX04.5

L3

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•	Civil Engg. CSE ECE EEE ME BS &H		
Organiz	nic Year 2021-22		Asst professor
1.	Are the questions being relevant to the assessment mastery of the learners on that course of study?		comes as well as to understand the
	Yes No. If yes, please rate it on a five-point scale _	_5	(5: High to 1: Low)
2.	Are the questions being very clear in easily understand	ndable languag	e without any sort of ambiguity?
	Yes No. If yes, please rate it on a five-point scale _	5	(5: High to 1: Low)
3.	Are the questions being crisp and concise and omi question response time?	ts irrelevant info	ormation that reduces the students'
	Yes No. If yes, please rate it on a five-point scale _		(5: High to 1: Low)
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	Yes No. If yes, please rate it on a five-point scale _		(5: High to 1: Low)
5.	Are the questions being addressing appropriate cog that facilitates critical thinking and problem-solving sl		Revised Bloom's Taxonomy (RBT)
	Yes No. If yes, please rate it on a five-point scale _	4	(5: High to 1: Low)
6.	Are the questions being single dimensional avoiding	multiple ideas to	o evaluate one response at a time?
	Yes No. If yes, please rate it on a five-point scale _	5	(5: High to 1: Low)
7.	In general, how do you rate the quality and standard	of questions?	
No of	Form No. AC 22, 00 2024LN C Pain Institute of Te	achaology Cont	vom Vizen Andhra Dradach



Commendable

Excellent

Good Satisfactory

8. General Remarks

Signature



Degree B. Tech. (U. G.) Program EEE			Academic Year 2021	- 2022		
Course Code			70	Semester	IL	
Course	Python Program	nming				
Dest A (Chart		C., 0 - 40 M				
	Answer Questions tions (1 through 5)	5 x 2 = 10 Marks)			Looming Outcome (a)	Del
	Questions (1 through 5) Write about print() and input() functions Learning Outcome (s) 20CS403.1					DoK L1
	What is a namespace? 20CS403.2					L1
	Write about Anonymous function 20CS403.3					L1
	Define polymorphism in python 20CS403.4					L1
	t is SciPy?				20CS403.5	L1
	Answer Questions					
	tions (6 through 15)			Marks	3 ()	DoK
	are different applica			4M	20CS403.1	L1
6 (b) List of	ut operators. Explain parison ii. L		iii. Membership	8M	20CS403.1	L2
Disco			OR			
exam	ples		ssions with suitable	6M	20CS403.1	L2
7 (b) Write arithm	a Python program netic operators	to demonstrate sin	nple calculator using	6M	20CS403.1	L3
8 (a) Desc	ribe Python iterative	statements with exa	amples	6M	20CS403.2	L2
					L3	
0/3 = .		,=======	OR			
9 (a) Expia 9 (b) Discu	in about data encry	ption in python	with annual a	5M	20CS403.2	L2
9 (b) Discuss about operations on Lists in Python with examples 7M 20CS403.2 L					L2	
10 (a) Expla	in about default and	keyword argument	s.	6M	20CS403.3	L2
10 (b) What	is recursion? Expl		and limitations with	6M		
suital	Suitable example					L3
11 (a) Discu	ss in detail about m	odulas is Duthas	OR	CLA	22221222	
	a brief note on PIP.		ackages via DID	6M 6M	20CS403.3 20CS403.3	L2
· · (5)	a blief flote off f f ,	Explain installing po	ackages via min	OIVI	2003403.3	L1
	e file. Write a Pythoother file	on program to copy	the contents of a file	6M	20CS403.4	L3
	a Python progra ple example	m to demonstrate	inheritance with a	6M	20CS403.4	L3
			OR			
Dame		P 0 1 19	B bit			
exam	examples			20CS403.4	L2	
13 (b) Write	Write about OOPS concepts in detail 6M 20CS403,4			L2		
	Explain in detail about canvas() and frame() with syntax			6M	20CS403.5	L2
14 (b) What	What is Pandas? Write its features & applications 6M 20CS403.5			L3		
15 (5)	OR					
	in in detail about Lis			6M	20CS403.5	L2
15 (b) What	What is NumPy? Write its features & applications 6M 20CS403.5				L2	

AC 15: 00: 2021 duestion Papes for End Semester Examination | Academic Regulation 2020

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Dept.: C	Civil Engg. CSE ECE EEE ME BS &H
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/(E/2	Form No. AC 23. 00.2021 N S Raju Institute of Technology, Sontyam, Vizag, Andhra Pradesh

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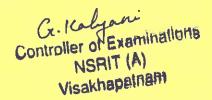
8. General Remarks



Supplementary Examination, Dec., 2021/Jan., 2022

Degree	B. Tech. (U. G.)	Program	CE/ME			Academic Year	2021 - 2022
Course Code	20BSX31	Test Duration	3 Hrs.	Max. Marks	70	Semester	ll l
Course	Engineering Phy	sics					

	(Short Answer Questions 5 x 2 = 10 Marks)			
No.	Questions (1 through 5)		Learning Outcome (s)	DoK
1	Compare half wave plate and quarter wave plate		20BSX31.1	L2
2	Compare 3 level and 4 level pumping systems		20BSX31.2	L2
3	Define Orientation Polarization		20BSX31.3	L1
4	Define Magnetostriction effect		20BSX31.4	Li I
5	Define Coordination number		20BSX31.5	L1
Part B	(Long Answer Questions 5 x 12 = 60 Marks)		2000110110	
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK
6	Define Interference. Discuss in detail the case of interference by			
	reflection in thin films with the relevant ray diagrams	12M	20BSX31.1	L2
	OR			
7	Discuss in detail the Fraunhofer diffraction due to single slit	12M	20BSX31.1	10
		12171	2003/31.1	1.2
8 (a)	Compare Ruby LASER and He – Ne LASER			
8 (b)	Discuss any three applications of LASER	6M	20BSX31.2	L2
0 (0)		6M	20BSX31.2	1.2
0 /=\	OR OR			
9 (a)	Compare Step index and Graded index optical fibers	6M	20BSX31.2	L2
9 (b)	Discuss any three applications of Optical fibers	6M	20BSX31.2	L2
10 (a)	Define (i) Magnetic dipole moment (ii) Magnetic susceptibility and (iii)	6M	20BSX31.3	L1
400.00	Magnetic permeability	OW	2000/01.0	61
10 (b)	Elaborately discuss the Hysteresis curve exhibited by Ferromagnetic	6M	20BSX31.3	1.2
	materials	0111	2000/01.0	42
44 (=)	OR			
11 (a)	Define (i) Dielectric Polarization (ii) Polarizability and (iii) Dielectric constant	6M	20BSX31.3	Lt
11 (b)	Compute Clausius – Mossoti relation and discuss its significance	C1.4		
11 (0)	Compare Clausius - Mossou relation and discuss its significance	6M	20BSX31.3	L2
12 (a)	Define (i) Este (ii) Personalise and (iii) Developed ii		F (475)	
	Define (i) Echo (ii) Reverberation and (iii) Reverberation time	6M	20BSX31.4	L1
12 (b)	Discuss in detail a method of determining absorption coefficient	6M	20BSX31.4	L2
42 (=)	OR			
13 (a) 13 (b)	Define (i) Ultrasonics and (ii) Non-Destructive Testing	4M	20BSX31.4	L1
13 (0)	Discuss in detail the production of Ultrasonics by Magnetostriction method	8M	20BSX31.4	L2
	meanod			_
14 (a)	Compute the expression of Bragg's law with the relevant ray diagram	Chi	0000000	(4)
14 (b)	Discuss Laue method with relevant sketch	6M	20BSX31.5	L2
17 (0)		6M	20BSX31.5	L2
4573	OR			
15 (a)	Compute the expression for the interplanar distance in cubic system	6M	20BSX31.5	L2
15 (b)	What are miller indices of the planes of a crystal?	6M	20BSX31.5	L2



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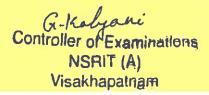
Good Satisfactory

8. General Remarks



Supplementary Examination, Dec., 2021/Jan., 2022

Degree		3. Tech. (U. G.)		ECE	Adam Mada	70	Academic Year	2021 - 20)22
Course		20BSX33 Applied Physics	Test Duration	3 Hrs.	Max. Marks	70	Semester	II	
			5 x 2 = 10 Marks)						
No.		is (1 through 5)	JAZ - IO MEIRS)				Leaming Ou	tcome (s)	DoK
1		esolving power of	f grating?				20BSX		Li
2			Stimulated emission	n of radial	ion		20BSX		L1
3			ons of dielectrics.				20BSX		L2
4	Write th equation		or time Independ	lent and	time depender	nt wa	ve 20BSX	33.4	L2
5		the applications					20BSX	33.5	L2
	_		$5 \times 12 = 60 \text{ Marks}$)					
No.		ns (6 through 15)		. 01		Mai	9		DoK
6 (a)	Obtain to		obtaining principal	maxima	in a single slit	81	M 20BSX	33.1	L2
6 (b)	What is	double refraction	? Explain it in Calc	ite crystal OR		41	M 20BSX	(33.1	L2
7 (a)	Derive to Newton		or diameters of b		dark fringes in	81	M 20BSX	(33.1	L2
7 (b)			ver of diffraction gr	rating.		41	M 20BS>	(33.1	L2
8 (a)		acceptance angl an optical fibre.	e. Derive an exp	ression f	or acceptance	81	M 20BS>	(33.2	L2
8 (b)			ients? Derive a rel		reen them.	4	M 20BS>	(33.2	L2
9 (a)	Explain diagram		and working of	OR He-Ne la	ser with neat	8	M 20BS	⟨33.2	L2
9 (b)			ation through grad	ed index	and step index	4	M 20BS	K33.2	L2
10 (a)	What is		tion? What is th	ne expres	sion for ionic	3	M 20BS	K33.3	L2
10 (b)		the magnetic ma	iterials.	0.0		9	M 20BS	X33.3	L2
11 (a)			nagnetic materials	OR ? Give the	ir characteristic	5	M 20BS	X33.3	L2
11 (b)		es and applicatio he Classius-Mos				7	M 20BS	X33.3	L2
12 (a)			of electrical cond	ductivity of	f metals on the	8	M 20BS	X33.4	L2
12 (b)		quantum free el an expression for	ectron model. de-Broglie wavele	ength of ma	atter waves.	4	M 20BS	X33.4	L2
484.3				OR				V00.4	
13(a)		ine Schrödinger of a particle,	s time independe	nt wave e	quation for the) b	SM 20BS	X33.4	L2
13(b)			gs of classical free					X33.4	L2
14 (a)		•	r effective mass Show that it varies		_	9	M 20BS	X33.5	L2
14 (b)			he properties of a			3	BM 20BS	X33.5	L2
15 (a)		Kronig - Penne potential.	ey model for the		an electron in	9	9M 20BS	X33.5	L2
15 (b)			extrinsic semicono	luctors.		3	3M 20BS	X33.5	L2



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Good Satisfactory

8. General Remarks



Semester End Examination, Sept./Oct., 2021

Degree		B. Tech. (U. G.)	Program	Commo	n to EEE/EC	E	Academic Year	2020 - 2021
Course	e Code	20ESX01	Test Duration	3 Hrs.	Max. Marks	70	Semester	
Course	9	ENGINEERING D	RAWING					
			***************************************				The state of the s	
Part A (swer Questions 2 x	c 5 = 10 Marks)					
No.		ons (1 through 2)					Learning Outcome	(s) DoK
1	Constr	uct a scale to meas ark a distance 37 m	ure up to 50 m if 1c	m represo	ents 4 m, find	its RF	20ESX01.2	L1
2		pentagon of side 3					70EDV04 4	10
-	Didire	pentagon of side 3	O WIIII				20ESX01.4	L3
Part B (Long Ans	wer Questions 5 x	12 = 60 Marks)					
No.		ons (3 through 12)			11507-1150	Marks	Learning Outcome	(s) DoK
3 (a)	Draw a	hyperbola having	its two asymptotes	s passing	through a			
	point if	at a distance of 3	00 mm from one as	ymptote a	and 36 mm	6M	20ESX01.1	L2
3 (b)	Constr	e outer. Draw a num	mal and tangent at a le 25 mm by using g	ny conver	thed	6M	2050V04.4	10
- (-/	10	act a nonagon of sia	ic 20 min by using g	ciletal IIIe	uioq	OIVI	20ESX01.1	L3
	Draw t	ne major axis of an	ellipse is 110 mm to	ng and the	e foci are at			
4 (a)	a dista	nce of 15 mm from	its ends. Draw the	ellipse by	concentric	6M	20ESX01.1	L3
4.753		method	N .					
4 (b)	A 4 cm	long line on map re	presents 1.5 metre l	ength. De	termine the	6M	20ESX01.1	L2
	a dista	nce of 4.6 metres or	enough to measure	up to 6 me	eters. Snow			
	A 70 m	m long line PQ is ir	nclined at 30° to the	HP. The	end P is 15			
5 (a)			and 25 mm above	the HP	. Draw its	4M	20ESX01.2	L3
	projecti		clined at 45° to the H	D and 201	4- 1/D 16-			
5 (b)	end A i	s in the HP and 40 r	nm infront of the VP.	Draw its	nmiections	8M	20ESX01.2	L3
	and de	termine traces			projociono	OIVI	200001.2	FO
		-		OR				
6 (a)	Draw tr	ne following projection						
0 (4)	II.		HP and 20 mm infroi HP and 40 mm behir			4M	20ESX01.2	L2
	III.		IP and 30 mm behir					
	IV.	D, is on both HP a	and VP					
6 (h)	A 60 m	m line AB, has an e	nd P at 25 mm abov	e the HP	and 30 mm			
6 (b)	its proje		clined at 50° to HP	and 40° t	o VP. Draw	8M	20ESX01.2	L2
	no proje	Juliona			1	Partie.		
7 (a)	Draw th	ne projections of a i	regular pentagon of	30 mm s	ide, having			
	one of	its sides in the HP	and its surface mal	king an a	ngle of 45°	6M	20ESX01.3	L2
	with the							
7 (b)	one of i	le projections of a c	ircular lamina of 50 nd inclined at 30° to	mm diam	eter having	011	0.000	
, (5)	0110 01 1	ra aidea iii tite AL gi	io inclined at 30° (0)	OR		6M	20ESX01.3	L3
	Draw th	e projections of a 6	0° set square of 30		and longer			
8 (a)	edge 12	20 mm one of its sic	les in the HP and its	s surface	making an	6M	20ESX01.3	L2
	angle o	f 45° with the HP						

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8 (b)	Draw the projections of a regular hexagon of 30 mm side, having one of its sides in the HP and inclined at 60° to the V.P and its surface making an angle of 45° with the H.P	6M	20ESX01.3	L3
9 (a)	A square prism, side of base 30 mm and axis 50 mm long, has its axis inclined at 60° to HP its has an edge of its base in the HP and inclined at 45° to VP. Draw the projections	6M	20ESX01.4	L2
9 (b)	Draw the projection of a cone, base 75 mm diameter and axis 100 mm long, lying on HP. on one of its generators with axis parallel to the V.P	6M	20ESX01.4	L3
	OR			
10 (a)	A square prism, side of base 30 mm and axis 50 mm long, has its axis inclined at 60° to HP its has an edge of its base in the H.P and inclined at 45° to VP. Draw the projections	6M	20ESX01.4	L2
10 (b)	Draw the projections of a cone, base 65 mm diameter and axis 120 mm long, lying on the ground on one of its generators with the axis parallel to the VP	6M	20ESX01.4	L3
	Draw top, front and side views of the isometric projection given in the figure	4014	20ESX01.5	L4
11		12M	2025301.5	L4
	O R			
12	Draw an isometric view of a square prism having a base with a 40 mm side and a 60 mm long axis, resting on the HP. a) on its base with axis perpendicular to the HP, b) on its rectangular faces with axis perpendicular to the VP and c) on its rectangular face with axis parallel to the VP	12M	20ESX01.5	1.4

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NSRIT (A)
Visakhapatnam

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Semester End Examination, Sept./Oct., 2021

The second secon	B. Tech. (U. G.)		CSE,CSM & CSD			Academic Year	2020 - 2021	
and designation and the second	20EC203	Test Duration	3 Hrs.	Max. Marks	70	Semester		
Course Digital logic Design								

No.	(Short Answer Questions 5 x 2 = 10 Marks) Questions (1 through 5)	-	Leaving Outer (1)	-
1	Convert (0.625) ₁₀ decimal number to binary number (7	N- uning	Learning Outcome (s)	DoK
2	successive multiplication method	/2 using	20EC203.1	L3
3	State the absorption law of Boolean algebra		20EC203.2	L1
	Give the general procedure for converting a Boolean expressi multilevel NAND diagram?	on in to	20EC203.3	L1
4	What are the three types of fundamental PLDS?	-	20EC203.4	L1
5	What is race around condition?		20EC203.5	L1
Part B	(Long Answer Questions 5 x 12 = 60 Marks)		2020200	
No.	Questions (6 through 15)	Marks	Learning Outcome (s)	DoK
6 (a)	Convert the given binary 1010110 to gray code	6M	20EC203.1	THE RESERVE AND ADDRESS OF THE PARTY OF THE
6 (b)	Convert the following: (i) 57 ₁₀ to binary (ii) 743 ₈ to binary (iii)	an open the Stindards of the Stindards	entrale up	L2
	A9B16 to binary	6M	20EC203.1	L2
7 (0)	OR OR		All the second s	
7 (a)	Convert (567.1875) ₁₀ into hexadecimal	4M	20EC203.1	L2
7 (b)	Design an 8421 to gray code converter	8M	20EC203.1	L2
	* I stands on any stands of the stands of th			
	Develop the given function		The same of the sa	
8 (a)	$Y (M, N, O, P) = \Sigma_m (0, 2, 4, 6, 9, 13)$ Draw the K-map and	6M	20EC203.2	L2
	Implement the simplified expression using basic gates		1020200.2	L-2_
8 (b)	Analyze the basic rules (laws) that are used in Boolean	- 1994 - market and proper ray (1984 a sisteman of		
0 (0)	expressions with few examples	6M	20EC203.2	L2
	OR			
) (a)	Simplify the following Boolean expression in i) SOP using			
(a)	Kamaugh map AC'+B'D+A'CD+ABCD	6M	20EC203.2	L2
(b)	Simplify the following Boolean expression in ii) POS using		Particular Particular Spring S	
(U)	Karnaugh map AC'+B'D+A'CD+ABCD	6M	20EC203.2	12
	-0.000 Product of the control of the			
0 (a)	Explain how a full adder can be built using two half adders	6M	2050000	
0 (b)	Design a 4-bit carry full adder circuit	6M	20EC203.3	L6
	OR	OIVI	20EC203.3	L6_
4 /-1	Using 8 to 1 multiplexer, realize the Boolean function	014		
1 (a)	$T = f(w, x, y, z) = \Sigma(0, 1, 2, 4, 5, 7, 8, 9, 12, 13)$	M8	20EC203.3	L6
4.41.1	Distinguish between a combinational logic circuit and a	484	und on	
1 (b)	sequential logic circuit	4M	20EC203.3	L6
	Applied and the state of the st	-		
	Show and implement the following funding the state of the	ir-tiring dissipping a specificalism programs.		
2 (a)	Show and implement the following function using a PROM			
~ (a)	$F(w,x,y,z) = \sum m(1,8,9,15)$	6M	20EC203.4	12
	$G(w,x,y,z) = \sum m(0,1,2,3,4,5,7,8,10,11,12,13,14,15)$			
2 (b)	Explain the functions of JK flip flop	6M	20EC203.4	L2

G. Kalyan

	OR			
13 (a)	Implement the following Boolean function using $3\times4\times2$ PLA, $F1(x, y, z) = \Sigma$ (0, 1, 3, 5) and $F2(x, y, z) = \Sigma$ (3, 5, 7).	6M	20EC203.4	L3
13 (b)	Realize a JK flip flop using SR flip flop	6M	20EC203.4	L3
14 (a)	Explain in detail SR latch using NAND	6M	20EC203.5	L2
14 (b)	Explain in detail SR latch using NOR	6M	20EC203.5	L3
15 (a)	Convert the SR Flip Flop to T Flip Flop	6M	20EC203.5	L3
15 (b)	Convert the JK Flip Flop to D Flip Flop	6M	20EC203.5	L3

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7.	in general, how do you rate the quality and standard of questions?



Good Satisfactory

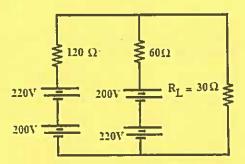
8. General Remarks



Supplementary Examination, Dec., 2021/Jan., 2022

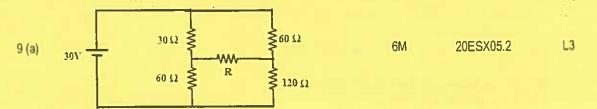
Degree Course	Code	B. Tech. (U. G.) 20EE201	Program Test Duration	ECE 3 Hrs. Max. Marks	70	Academic Year 2021- Semester	2022 II
Course		Network Analysis	s and Synthesis				
•		nswer Questions :	5 x 2 = 10 Marks)			Learning Outcome (s)	DoK
		Kirchhoff's Law's (K	The second secon	GR.		20EE201.1	L1
			er position theorem			20EE201.2	L1
			Write the condition		ioo sad	20EE201.3	Ł1
4		quality factor and with Resonance circuits		or expressions for ser	ies and	20EE201.4	L1
			ons for Y and Z para	ameters		20EE201.5	L1
	-		5 x 12 = 60 Marks)				B 16
No.		ons (6 through 15)	I and M from the		Marks	Learning Outcome (s)	DoK
		ie Node voltages \ analysis	71 and V ₂ from the	given network using			
6 (a)	110001	TI VI	5Ω V2		6M	20ESX05.1	L3
	3,1,1 (1	2Ω \$1Ω	-1.4A			
6 (b)		the principles of d ne example	uality theorem in r	networks and explain	6M	20ESX05.1	L2
	F		0.1 t t-i-	OR			
7 (a)	examp		Cut-set matrix repr	resentation using one	6M	20ESX05.1	L2
			ed in the 5Ω resis	-			
	transf	ormation method	for the circuit show	wn below.			
7 (b)	4A (5Ω 💸	1Ω **	↑ 5A	6M	20ESX05.1	L3
8 (a)			Maximum Power taximum power diss	ransfer theorem and	6M	20ESX05.2	L2
8(b)			, calculate the curre		6M	20ESX05.2	L3

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OR

What is the power delivered to the resistor R in the below circuit?



9 (b) State reciprocity theorem and derive the condition for the same 6M 20ESX05.2 L2

Find the current through the inductor after switch operation (t>0), assume the switch is opened at t=0 0



OR

11 (a) Describe the procedure for evaluation of initial conditions for RL and RC circuit

OR

20ESX05.3 L2

Write the expressions for Voltage across R (VR) and the Voltage across inductor (VL) with graphical representations.

11(b)	+ + = 0 R V L	6M	20ESX05.3	L3
	- (102			

Derive the expression for frequency at which the voltage across inductor is maximum in a RLC series circuit

20ESX05.4 L2

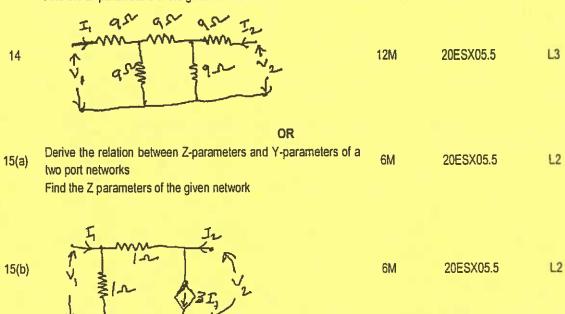
OR

Derive the expression for resonance frequency and Quality factor of RLC parallel circuit

Derive the expression for resonance frequency and Quality 12M 20ESX05.4 L3

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Find the Z- parameters of the given network



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