Course Title: M	ATHEMATICS - II		
Section : CIVI			: 01 of 02
Revision No : 00		Approve	d By: HOD
Tools: Black bo	ard, PPT'S, MS Teams TOPIC	Date	Mode of Delivery
VECTORS CO1: solve syste Seidel (L3) TB:" Engineering	G SYSTEM OF LINEAR EQUATIONS, EIGEN Vem of linear algebraic equations using Gauss eliming Mathematics", Dr. T.K.V.Iyengar; S.Chand Introduction to matrices.	ination, Gauss Jo	
1	introduction to matrices,		
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		
5	PAQ form problems		Lecture interspersed
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B	From:	
8	Problems on rank method		
9	Gauss Elimination method	10-05-2021	with discussions
10	Eigen values – definition	To:	
11	Properties of Eigen values	29-05-2021	
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
UNIT – II:, CAL CO2: Develop t applications (L6 TB:" Engineerin	EY-HAMILTON THEOREM, QUADRATIC FOR the use of matrix algebra techniques that is needed by the state of the st	d by engineers for	r practical
15	Caley Hamilton theorem, verification, problems		

16	Finding inverse and power of a matrix by caley	eries officers a replication of unit	
	Hamilton theorem		
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	31-05-2021	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	10.06.0001	
22	Orthogonal reduction method	12-06-2021	
23	Congruent operations method .		
24	Lagrange's method		
25	Problems on finding nature of a QF		

### UNIT-III: UNIT – III: ITERATIVE METHODS:

CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)

TB: "Engineering Mathematics", Dr. T.K.V. Iyengar; S. Chand publications

ID. Lingimeer	ing Mathematics, Dr. 1112, Hijengar, Stemana p	a o menomo	
26	Introduction	From:	
27	Method – 1: Bisection method		
28	Problems	14-06-2021	
30	Method – 2: Regula falsi method		
31	Problems	To:	
33	Method – 3: Iteration method		
34	Problems	19-06-2021	Lecture
35	Method – 4: Newton Raphson method	. &	interspersed
36	Problems	From:	with
37	Newton Raphson method simultaneous equations	28-06-2021	discussions
38	Gauss Jacobi Method	28-00-2021	-
39	Gauss Seidal Method	То:	
40	problems	07-07-2021	

#### **UNIT - IV: INTERPOLATION**

CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

41	Introduction: Forward and Backward Differences		
----	--	--	--

42	Newton's Forward interpolation formula	# a. 2.730 km	STATE OF THE STATE
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems	00 07 2021	interspersed
47	Problems	08-07-2021	with discussions
48	Gauss Backward interpolation formula – Problems	То:	
49	Problems	24-07-2021	
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		

# UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION

CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

53	Trapezoidal rule		
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule	From:	Lecture
57	Taylor's series method		interspersed
58	Problems	26-07-2021.	with discussions
59	Picard's method of successive approximation	To:	
60	Euler's method	07-08-2021	
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

K. Buneverleigh Signature of Faculty

Signature of HOD

Tentative Lesson Plan: R201202

		NEERING CHEMISTRY	Page No: 3	
Section :	CIVIL	Date:11-5-2021	Page No: 3	· HOD
Revision N		Prepared By: B.SOWJANYA	Approved By	: HUD
Tools:			D.4.	Mode of
No. of Per	iods	TOPIC	Date	Delivery
				Denvery
S.NO		TOPIC		
		UNIT -I HIGH POLYMERS AND PLA	ASTICS	
CO1: Imp	ortance of	usage of plastics in household appliances and	composites(FRP) in	aerospace
and autom	otive indu	stries.		
1.	Polyme	risation:- Introduction		
2.	Mechan	ism of polymerization		
3.	Stereo r	egular polymers	n 11.5.21	
4.	Method	s of polymerization (emulsion and suspension)	From: 11-5-21	
5.	Physica	l and mechanical properties	To:25-5-21	Lecture
6.	Advant	ages and limitations of plastics	10:23-3-21	Intersperse
7.	Thermo	pplastics and Thermosetting plastics		With
8.	Compo	unding of plastics		Discussion
9.	Fabrica	tion (4/5 techniques) of plastics		Discussion
10.	Prepara	tion, properties and applications of PE,PVC		
11	Bakelit	e Teflon and polycarbonates		
12	Flastor	ners :- Natural rubber- compounding		
13	Vulcan	ization - Synthetic rubbers: Buna S, Buna N,		
14	Thioko	1 polyurethanes -Applications of elastomers		
15	Compo	site materials & Fiber reinforced plastics		
16	Biodeg	radable polymers – Conducting polymers.		
10	Broade	UNIT-II		
FLECTI	ROCHEM	IICAL CELLS AND CORROSION		
CO2. O	itline the l	pasies for the construction of		
electroch	emicalcell	s, batteries and fuelcells. Understand the		
mechanis	m of corre	osion and how it can be prevented.		Lasture
17	Galvat	oic cells - Reversible and irreversible cells		Lecture
18	Single	electrode potential – Electro chemical series	From: 26-5-21	With
	and us	es	From: 20-3-21	Discussion
19	Standa	ard electrodes (Hydrogen and Calomel	To:15-6-21	Discussio
	electro	odes)		
20	Conce	ntration Cells -Batteries: Dry Cell - Ni-Cd cell	S	
21	Ni-Me	etal hydride cells - Li cells - Zinc – air cells.		
	Fuel C	Cells		
22	Corro	sion: - Definition – Theories of Corrosion		
23	Forma	tion of galvanic cells by different metals		
24	conce	ntration cells, differential aeration, waterline		
	corros	ion		
		vity of metals – Pitting corrosion - Galvanic		

Factors which influence the rate of corrosion

26	Factors which influence the rate of corrosion		
27	Protection from corrosion – Design and material		
21	selection		
28	Cathodic protection - Metallic (cathodic & anodic)		
20	coatings		
29	(Galvanizing, Tinning, Electroplating, Electroless	1	
2)	plating)		
UNIT-III:	CHEMISTRY OF MATERIALS	From: 166-	
	ress the increase in demand as wide variety of advanced	21	
	are introduced; which have excellent engineering		
	Classify and discuss the materials used in major	To:	
	like steel industry, metallurgical industries and	20-6-21	
	n industries and electrical equipment manufacturing		
	Lubrication is also summarized.		
		1	Tastana
30	Part- A: Nano materials:-		Lecture
30	Introduction-sol-gel method-characterization by BET, SEM	Enough 20 6	Interspersed
31	and TEM methodsapplications of graphene-carbon	From: 28-6- 21	With
	nanotubes	21	
32	and fullerenes:Types, preparation and applications	To:	Discussions
	Thermal	7-7-21	
33	analysis techniques: Instrumentation and applications		
	of		
34	thermogravimetric analysis (TGA), differential		
	thermal		
35	analysis (DTA), differential scanning calorimetry (DSC).		
36	Part-B: Refractories: - Definition, classification,		Lecture
30	properties),	5-80	Lecture
37	refractoriness, refractoriness under load, porosity		Interspersed
38	(and thermal spalling), failure of refractories.		With
	Lubricants: -		
39	Definition, mechanism of lubricants and properties		Discussions
	(definition		210000010110
UNIT IV:	FUEL TECHNOLOGY		
CO4:	Relate the need of fuels as a source of energy to any		
	dustry, particularly industries like thermal power stations,		
	eel industry, fertilizer industry etc., and hence introduced.		
40	Fuels – Introduction – Classification –	From: 08-7-21	
41	Calorific value - HCV and LCV - Dulong's formula		
42	Bomb calorimeter – Numerical problems	To:	Lecture
43	Coal - Proximate and ultimate analysis – Significance	26-7-21	Interspersed
44	Liquid fuels – Petroleum- Refining	1	With
45	Cracking- Synthetic petrol	1	Discussions
46	Petrol ,Diesel knocking - Octane and Cetane ratings		
47	Anti-knock agents – Power alcohol – Bio-diesel		
48	Gaseous fuels – Natural gas, LPG and CNG		
49	Combustion – Calculation of air for the combustion of		
	a fue <del>l</del>	en e	

50	Flue gas analysis, Orsat apparatus problems on combustion		
51	Explosives:- Rocket fuels		
UNIT V: V	VATER TECHNOLOGY	From: 28-7-21	
CO5:	Explain the importance and usage of water as basic		
materi	al in almost all the industries; interpret drawbacks of	To:	
steam	boilers and also how portable water is supplied for	07-8-21	
drinkii	ng purposes.		
52	Determination of hardness by complexometric method		
53	Boiler troubles (priming and foaming, scale formation,		Lecture
	boiler corrosion		
54	caustic embrittlement)-internal treatments-		Interspersed
	softening of hard water		
55	zeolite processs and related sums, ion exchange		With
	process		
56	Treatment of industrial waste water Portable water and		Discussions
	its specifications-steps involved in purification of		
	water-		
57	chlorination, break point chlorination-reverse osmosis		
	and electro dialysis		

"Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.

B. Sowjanyo Signature of Faculty Signature of HOD

### TENTATIVELESSON PLAN: R201203 ENGINEERING MECHANICS

Course Title: EN	NGINEERING MECHANICS	Course code	
Section : Sec I	Date: 10/05/2021	Page No: 01 to	03
Revision No: 00		Approved By:	HOD
Tools: MS TEA	MS, GOOGLE MEET, PPT'S		
S.NO	TOPIC	Date	Mode of Delivery
UNIT-IINTROI	DUCTION TO ENGG. MECHANICS, SYSTE	MS OF FORCES	S
CO1: Become fa	miliar with a basic concepts of force and friction	on , direction an	d its
application			
	RING MECHANICS", S.S BHAVIKATTI, 1st Edition	on, New age public	cations, 2012.
1	UNIT – 1 Introduction		
	Basic terminologies, Laws of mechanics, Laws of	of ·	
2 -	mechanics, Laws of mechanics		
3	Systems of Forces ·		
4	Resultant of Forces, Parallelogram law		7.5
5	Parallelogram law problems		
6	Resolution method- concurrent forces, Problems		Lecture
7	Problems		
8	Problems		
9	Problems	From:	interspersed
10	Moment of force, couple	10/05/2021	with
11	Moment of force, couple, Varignon's theorem	— <u> </u>	discussions
12	Resolution of force to a force and couple	To:	Online
13	Parallel forces and problems	29/05/2021	teaching
· 14	Problems .		
15	Resultant of concurrent system in space		
16	Resultant of concurrent system in space-problem	ns	
17	Friction introduction, coefficient of friction,		
18	coulomb's laws of dry friction, cone of friction, angle of friction		
19	Problems		
UNIT-II	EQUILIBRIUM OF SYSTEMS OF FORCES		
	wledge about free body diagrams. Solution to p	roblems using a	ranhical
	and law of triangle of forces.	noblems using g	гаритсат
	UNG MECHANICS", S.S BHAVIKATTI, 1st Editi	ion. New age publ	ications, 2012.
20	Equilibrium of system of forces	age paoi	
21	Equilibrium of system of forces problems	From:	Lecture
22	Problems	31/05/2021	interspersed
23	Problems- In space	To:	with
24	Problems – Beams	12/06/2021	discussions

applica			
	ERING MECHANICS", S.S BHAVIKATTI, 1st Edition	, New age public	cations, 2012.
21	UNIT – 3 Centroids of simple figures		
22	Problems		
23	Problems		
24	Centroids of Composite Figures		
25	Problems		Lecture
26	Problems		
27	Pappus theorem – theorem 1	From:	interspersed
21	Pappus theorem – theorem 2	14/06/2021	with
28	Centre of gravity of simple body, right circular cone	To:	discussions Online
20	Area Moment of Inertia Definition, Polar	15/07/2021	Teaching
29	Moment of Inertia, Transfer Theorems	13/0//2021	reacting
20	Moments of Inertia of Composite Figures-		
30	problems		
	Mass moment of inertia of basic bodies – rod,		
31	rectangular plate, circular plate		
32	Mass moment of inertia of basic bodies -, solid		
	그리고 그리는 그리고 있는데 아니라		
	cone, solid sphere  RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil	inear paths, its	velocity and
CO4:Becomacceleration MECHANIC	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication	inear paths, its otion. TB:"ENC	velocity and
CO4:Becomacceleration MECHANIC 33	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions	inear paths, its otion. TB:"ENO ns, 2012.	velocity and
CO4:Become acceleration MECHANIC 33	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT - 4 Kinematics and Kinetics, Introductions Work Energy method	inear paths, its otion. TB:"ENC ns, 2012. From:	velocity and GINEERING  Lecture
CO4:Becom acceleration MECHANIC 33 34 35	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion	inear paths, its otion. TB:"ENO ns, 2012.	velocity and GINEERING  Lecture
CO4:Become acceleration MECHANIC 33 34 35 36	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems	inear paths, its otion. TB:"ENO ns, 2012. From: 16/07/2021	Lecture intersperse with
CO4:Become acceleration MECHANIC 33 34 35 36 37	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT - 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method	inear paths, its otion. TB:"ENG ns, 2012. From: 16/07/2021 To:	Lecture intersperse with
CO4:Becom acceleration MECHANIC 33 34 35 36 37 38	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems	inear paths, its otion. TB:"ENO ns, 2012. From: 16/07/2021	Lecture intersperse with discussion Online
CO4:Becomacceleration MECHANIC 33 34 35 36 37 38 39	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems	inear paths, its otion. TB:"ENG ns, 2012. From: 16/07/2021 To:	Lecture intersperse with discussion Online
CO4:Become acceleration MECHANIC 33 34 35 36 37 38 39 UNIT-V	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION	inear paths, its otion. TB:"ENO ns, 2012. From: 16/07/2021 To: 31/07/2021	Lecture intersperse with discussion:
CO4:Becomacceleration MECHANIC  33 34 35 36 37 38 39 UNIT-V CO5:Becom	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic	inear paths, its otion. TB:"ENC is, 2012.  From: 16/07/2021  To: 31/07/2021	Lecture intersperse with discussions Online Teaching
CO4:Becomacceleration MECHANIC  33 34 35 36 37 38 39 UNIT-V CO5:Becom	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic	inear paths, its otion. TB:"ENC is, 2012.  From: 16/07/2021  To: 31/07/2021	Lecture intersperse with discussions Online Teaching
CO4:Become acceleration MECHANIC 33 34 35 36 37 38 39 UNIT-V CO5:Become TB:"ENGIN	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetics EERING MECHANICS", S.S BHAVIKATTI, 1st Edition	inear paths, its otion. TB:"ENC is, 2012.  From: 16/07/2021  To: 31/07/2021	Lecture intersperse with discussions Online Teaching
CO4:Becomacceleration MECHANIC  33 34 35 36 37 38 39 UNIT-V CO5:Becom	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic	inear paths, its otion. TB:"ENC is, 2012.  From: 16/07/2021  To: 31/07/2021	Lecture interspersed with discussions Online Teaching
CO4:Become acceleration MECHANIC 33 34 35 36 37 38 39 UNIT-V CO5:Become TB:"ENGIN	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic EERING MECHANICS", S.S BHAVIKATTI, 1st Edition UNIT – 5 Kinetics - Analysis of body in	inear paths, its otion. TB:"ENG is, 2012.  From: 16/07/2021  To: 31/07/2021	Lecture intersperse with discussions Online Teaching
CO4:Become acceleration MECHANIC 33 34 35 36 37 38 39 UNIT-V CO5:Become TB:"ENGINE 40	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic EERING MECHANICS", S.S BHAVIKATTI, 1st Edition UNIT – 5 Kinetics - Analysis of body in translation, rotation Rotation about fixed axis	inear paths, its otion. TB:"ENC is, 2012.  From: 16/07/2021  To: 31/07/2021  es. on, New age pub	Lecture intersperse with discussion Online Teaching
CO4:Become acceleration MECHANIC 33 34 35 36 37 38 39 UNIT-V CO5:Become TB:"ENGINE 40 41 42	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic EERING MECHANICS", S.S BHAVIKATTI, 1st Edition UNIT – 5 Kinetics - Analysis of body in translation, rotation Rotation about fixed axis Analysis in plane motion	inear paths, its otion. TB:"ENG is, 2012.  From: 16/07/2021  To: 31/07/2021	Lecture intersperse with discussion Online Teaching
CO4:Become acceleration MECHANIC 33 34 35 36 37 38 39 UNIT-V CO5:Become TB:"ENGINE 40 41 42 43	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic EERING MECHANICS", S.S BHAVIKATTI, 1st Edition UNIT – 5 Kinetics - Analysis of body in translation, rotation Rotation about fixed axis Analysis in plane motion problems	inear paths, its otion. TB:"ENG is, 2012.  From: 16/07/2021  To: 31/07/2021  es. on, New age pub	Lecture intersperse with discussions Online Teaching
CO4:Becomacceleration MECHANIC  33  34  35  36  37  38  39  UNIT-V  CO5:Becom TB:"ENGINITAD TRANGE T	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic EERING MECHANICS", S.S BHAVIKATTI, 1st Edition UNIT – 5 Kinetics - Analysis of body in translation, rotation Rotation about fixed axis Analysis in plane motion problems problems problems	inear paths, its otion. TB:"ENG is, 2012.  From: 16/07/2021  To: 31/07/2021  es. on, New age pub  From: 02/08/2021  To: To:	Lecture intersperse with discussions Online Teaching  Lecture intersperse with discussions with discussions on the discussions on the discussion with discussion with discussion
CO4:Become acceleration MECHANIC 33 34 35 36 37 38 39 UNIT-V CO5:Become TB:"ENGIN 40 41 42 43 44 45	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic EERING MECHANICS", S.S BHAVIKATTI, 1st Edition UNIT – 5 Kinetics - Analysis of body in translation, rotation Rotation about fixed axis Analysis in plane motion problems problems Principle of work energy, Impulse-momentum	inear paths, its otion. TB:"ENG is, 2012.  From: 16/07/2021  To: 31/07/2021  es. on, New age pub	Lecture intersperse with discussions. Online Teaching  Lecture intersperse with discussions on the discussions on the discussion of the di
CO4:Become acceleration MECHANIC 33 34 35 36 37 38 39 UNIT-V CO5:Become TB:"ENGINE 40 41 42 43 44	RECTILINEAR AND CURVILINEAR MOTION e familiar with motion in straight line and in curvil computation and methods of representing plane m S", S.S BHAVIKATTI, 1st Edition, New age publication UNIT – 4 Kinematics and Kinetics, Introductions Work Energy method applications to particle motion problems Impulse momentum method problems problems RIGID BODY MOTION e familiar with rigid motion kinematics and kinetic EERING MECHANICS", S.S BHAVIKATTI, 1st Edition UNIT – 5 Kinetics - Analysis of body in translation, rotation Rotation about fixed axis Analysis in plane motion problems problems problems	inear paths, its otion. TB:"ENG is, 2012.  From: 16/07/2021  To: 31/07/2021  es. on, New age pub  From: 02/08/2021  To: To:	Lecture intersperse with discussions Online Teaching  Lecture intersperse with discussions on the discussions on the discussions with discussion with discussions on the discussion of the discu

49	Kinetics - Analysis of body in translation, rotation	
50	Rotation about fixed axis	
51	Analysis in plane motion	
52	problems	
53	problems	
54	Principle of work energy, Impulse-momentum	
55	problems	

Signature of Faculty

2 dway Signature of HOD

PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

Chuy hand

Section : CIVI	L Date: 10-05-2021	Page No	: 01 of 03
Revision No : 00	Prepared By: Hameeda Khatoon	Approve	ed By: HOD
Tools: MS Team	ns, PPT		
No. of Periods	TOPIC	Date	Mode of Delivery
CO1: To learn a	uction to Computers bout the computer systems, computing environmen am and Structure of a C Program. ng for Problem Solving, Behrouz A. Forouzan, Rich		
1	Introduction to Computers		
2	Creating and Running Programs		
3	Computer Numbering System	From: 11/05/2021	Online Class with MS Teams
4	Storing Integers		
5	Storing Real Numbers		
6	Introduction to the C language		
7	Background C programs		
8	Identifiers, Types, Constants I/O		
9	Programming Examples	To: 26/05/2021	
10	Scope, Storage Classes and Type qualifier		
11	Structure of a C program: Expressions precedence and associativity		
12	Side Effects		
13	Evaluating Expressions		
14	Type Conversion statements		
15	Simple Programs		
16	Command Line Arguments		
17	Tutorial Class		

UNIT-II: Operators, selection and control statements

CO2: To gain knowledge of the operators, selection, control statements and repetition in C

18	Bitwise Operators: Exact Size Integers		
19	Logical bitwise operators		
20	Shift Operators	From:	
	Selection and Making decisions: Logical Data and		
21	Operators		
22	Two way Selection		Online Class with MS Teams
23	Multiway Selection, More standard functions		
	Repitition: Concept of loop, Pretest and Post test	27/05/2021	
24	loops, Initialization and updating	T	
25	Event and counter controlled Loops	To: 14/6/2021	
26	Loops in C, Other statements related to Looping		
27	Looping applications, Programming Examples.		
28	Tutorial Class		

UNIT-III: Arrays, Strings, Enumerated, Structure and Union

CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types

TB: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE

29	Arrays: Concepts using Arrays in C		
30	Array applications		valuation of the state of the s
31	Two dimensional arrays, Multi dimensional Arrays		e de la company
32	Strings: String concepts, C string		
33	String I/O Functions		
34	Arrays of String, String Manipulation Functions	From:	
35	String Programming Examples	15/06/2021	Ouline
36	Enumerated, Structure, and Union: The Type Definition (Type def), Enumerated Types	To: 30/06/2021	Online Class with MS Teams

37	Structures		
38	Unions		
39	Programming Examples		
40	Tutorial Class		
NIT-IV: Po	ointers and Processor Commands		
of pre-proces	milate about pointers, dynamic memory alloc sor. ming for Problem Solving, Behrouz A. Forouzan.		
41	Pointers: Introduction pointers to pointers	, KRHAIG F.GHDEIG	CENGAGE
42	Compatability, Lvalue and Rvalue		
43	Pointer Applications: Arrays and Pointers	From:	
44	Pointer arithmetic and Arrays	01/07/2021	Online
45	Memory Allocation Function	To:	Class with MS Team
46	Array of pointers	22/07/2021	Wis ream
47	Program Applications		
48	Processor Commands		
49	Tutorial Class		
	octions and files milate about File I/O and significance of functi	ions.	
	Functions: Designing	, Richard F.Gilberg	, CENGAGI
TB: Program	ming for Problem Solving, Behrouz A. Forouzan	, Richard F.Gilberg	, CENGAGI
<b>ΓB: Program</b> 50	Functions: Designing	, Richard F.Gilberg	, CENGAGI
50 51	Functions: Designing  Structured Programs	From:	, CENGAGI
50 51 52	Functions: Designing  Structured Programs  Function in C		Online
50 51 52 53	Functions: Designing  Structured Programs  Function in C  User Defined Functions	From: 23/07/2021 To:	-
50 51 52 53	Functions: Designing  Structured Programs  Function in C  User Defined Functions  Inter Function Communication	From: 23/07/2021	Online Class with

	of Faculty  Oluullul	
Signature	of Faculty	Signature of HOD
Hamereo	le Chetron	Signature of HOD
66	Functions for files	
65	Standard Library	
64	Binary I/O: text versus Binary Streams	
63	Character I/O functions	
62	Formatting I/O functions	
61	Standard Library input/ Output Functions	
60	Streams	
59	Text i/O Files:	
58	Recursion	

Hamerede bletron

Course T	Title: BUILDING MATERIALS & CONC	CRETE TECHNOLOGY
Section : Sec A	Date: 10-05-2021	Page No: 1 of 3
Revision No: 00	Prepared By :A.ANOOP KUMAR	Approved By : HOD

Tools: Black board, PPTs

S. No	Unit / Topic	Date	Mode of delivery
	UNIT 1: stones, brick, tiles, wood, paints  Co 1: To know various engineering properties of building construction materials and Suggest their suitability  Tb:Building Materials by S.K.Duggal, new age international publications,		
1	Introduction to stones,brick,tiles,wood & paints	11-05-2021	
2	Stones: classification of stones	12-05-2021	
3	Propertie of stones in structural requirement	13-05-2021	
4	Bricks: composition of good brick earth	15-05-2021	Lecture
5	Various methods of manufacturing of bricks	18-05-2021	interspersed
6	Tiles: characteristic of good tile	19-05-2021	with
7	Manufacturing of tiles	19-05-2021	discussions
8	Types of tiles	20-05-2021	
9	Wood: structure- properties	20-05-2021	
10	Seasoning of timber- classification of various type of woods used in buildings	21-05-2021	
11	Defects in timber	22-05-2021	
12	Paints: white washing and distempering	25-05-2021	
13	Constituent of paints	26-5-2021	
14	Types of paint- painting of new and old wood- varnish	27-05-2021	
15	Tutorial-1	27-05-2021	
	UNIT 2: aggregates, cement and admixture		

LOWER TO SERVICE TO SE	Co2: Identify the functional role of ingredients of		
	concrete and apply this knowledge to concrete mix design		
	Tb: Concrete technology by M.S Shetty		
16	Aggregate classification	28-05-2021	
17	Bond,strength and mechanical properties of aggregates	29-05-2021	
18	Physical properties of aggregates, bulking of sand	01-06-2021	
19	Deleterious substance in aggregates, soundness of aggregate	02-06-2021	
20	Alkali-aggregate reaction- thermal properties	03-06-2021	
21	Sieve analysis- fineness modulus	04-06-2021	Lecture interspersed
22	Grading curves- grading of fine & coarse aggregates as per relevant is codes,maximum aggregate size	05-06-2021	with discussions
23	Portland cement: chemical composition, hydration, structure of hydrated cement	08-06-2021	
24	Setting of cement, fineness of cement	09-06-2021	
25	Tests for physical properties- different grades of cements	10-06-2021	
26	Supplementary cementitious materials: flyash, ggbs, silica fume,rice husk ash,calcinated ash	11-06-2021	
27	Admixtures: mineral and chemical admixtures	12-06-2021	
	UNIT 3: Fresh concrete		
	Co3: Acquire and apply fundamental knowledge in the fresh and hardened properties of concrete.		
	Tb: Concrete technology by M.S Shetty		
28	Manufacture of concrete	15-06-2021	
29	Mixing and vibration of concrete	16-06-2021	
30	Workability- segregation and bleeding	17-06-2021	
31	Factor affecting workability	18-06-2021	
32	Measurement of workability by different tets	19-06-2021	
33	Effect of time and temperature on workability	29-06-2021	
34	Quality of mixing water	30-06-2021	
35	Ready mix concrete, shortcrete	01-07-2021	
36	Tutorial-3	2-07-2021	

	UNIT 4: Hardened concrete Co4: Acquire and apply fundamental knowledge in the		
	fresh and hardened properties of concrete		
	Tb: Concrete technology by M.S Shetty		Lecture interspersed
37	Water/cement ratio-abram's law	02-07-2021	with discussions
38	Gel space ratio	03-07-2021	discussions
39	Nature of strength of concrete- maturity concept	06-07-2021	
40	Strength in tension and compression	07-07-2021	
41	Properties of hardened concrete (elasticity, creep shrinkage,poisso's ratio, water absorption, permeability, etc)	08-07-2021	
42	Properties of hardened concrete (elasticity, creep shrinkage,poisso's ratio, water absorption, permeability, etc)	09-07-2021	
43	Relation between compression and tenile strength, curing	10-07-2021	
44	Tutorial-4	13-07-2021	
	UNIT 5: Testing of hardened concrete		
	Co5: Acquire and apply fundamental knowledge in the		
	fresh and hardened properties of concrete		Lecture
	Tb: Concrete technology by M.S Shetty		interspersed
45	Factor affecting properties of hardened concrete	14-07-2021	with discussions
46	Compression tests	15-07-2021	
47	Tension tests	16-07-2021	
48	Flexure tests	17-07-2021	
49	Non-destructive testing methods	20-07-2021	
50	Non-destructive testing methods	22-07-2021	
51	Codal provision for NDT	23-07-2021	
52	Rebound hammer and upv method	24-07-2021	
53	Rebound hammer and upv method	27-07-2021	
54	Tutorial-5	28-07-2021	

Faculty/ Date

of my felles

Lomp HOD/Date of St21

Section : EEE	Date: 10-05-2021	Page No	: 01 of 03
Revision No : 00			ed By : HOD
	ard, PPT'S,MS Teams		
No. of Periods	TOPIC	Date	Mode of
			Delivery
UNIT – I: VEC	TOR CALCULUS		
CO1: To interp			
	rentoperatorssuchasgradient, curland divergence,	to	
	kdoneagainstafield, circulationandfluxusingvector		
TB:" Engineeri	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand p	ublications	
1	Vector Differentiation:Introduction		
2	Properties of vectors and scalars		170
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6.	Divergence of a vector		
7	Curl of a vector	From: 10/5/2021 to 29/5/2021	Lecture interspersed with discussions
8	Properties of gradient		
9	Vector identities		
10	Vector identities		
11	Problems on application of gradient		
12	Problems on divergence and curl		
13	Vector Integration: Introduction		
14	Problems on line integral		
15	Problems on line integral		
16	Problems on surface integrals		
17	Problems on volume integrals		
18	Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
	LACE TRANSFORMS		
네트리 프로그램 하나라 가는 지난 때문에는 그런 사이트리를 받는데?	heLaplacetransformfor solvingdifferentialequation		
	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand J	oublications	
22	Laplace Transforms: Definitions, Existence		
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties	From	
	Change of scale property	1/6/2021	Lecture
25	Laplace Transforms of derivatives; Integrals		intersperse
26	$L(t^n f(t))$	To	with
27	Laplace Transforms of division by t	15/6/2021	discussions
28	Evaluation of integrals		
29	Laplace Transforms of periodic functions; unit		
29			
20	step functions; Unit impulse functions		· Carlona v
A.M. 17. 2 30	Inverse Laplace Transforms:	15.	

Properties of inverse transform Convolution theorem Solutions of Difference Equations  IER SERIES AND FOURIER TRANSFORMS orcomputetheFourierseriesofperiodicsignals eforwardsandinverseFouriertransformtoaran Mathematics", Dr. T.K.V.Iyengar; S.Chand publi ntroduction Periodic functions Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval Half range sine and cosine series	From	
Solutions of Difference Equations  IER SERIES AND FOURIER TRANSFORMS or compute the Fourier series of periodic signals reforwards and inverse Fourier transform to a rank Mathematics", Dr. T.K.V. Iyengar; S. Chand public ntroduction Periodic functions Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval Half range sine and cosine series	geofnon-period ications From	_
IER SERIES AND FOURIER TRANSFORMS or compute the Fourier series of periodic signals eforwards and inverse Fourier transform to a ran Mathematics", Dr. T.K.V. Iyengar; S. Chand public ntroduction Periodic functions Fourier series of periodic function Dirichlets conditions Even and odd functions Change of interval Half range sine and cosine series	geofnon-period ications From	_
orcomputetheFourierseriesofperiodicsignals eforwardsandinverseFouriertransformtoaran Mathematics", Dr. T.K.V.Iyengar; S.Chand public ntroduction Periodic functions Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval Half range sine and cosine series	geofnon-period ications From	_
Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval Half range sine and cosine series		
Dirchlets conditions Even and odd functions Change of interval Half range sine and cosine series		
Even and odd functions Change of interval Half range sine and cosine series		
Change of interval Half range sine and cosine series	16/6/2021	Lecture
Half range sine and cosine series		
	To	intersperse
Fourier transforms	.3/6/2021	with
		discussions
Sine and cosine transforms	A CONTRACTOR OF THE STATE OF TH	
nverse transforms		
Finite Fourier transforms		
Introduction		
Introduction		
Introduction Formation of PDE by eliminating arbitrary		
Introduction Formation of PDE by eliminating arbitrary constants		
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary		
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions		
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE	From	Lecture
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE Method of grouping	From 5/7/2021	Lecture intersperse
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE Method of grouping Method of multipliers	From 5/7/2021 To	intersperse
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE Method of grouping Method of multipliers Nonlinear PDE $f(p,q) = 0$	From 5/7/2021	intersperse with
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE Method of grouping Method of multipliers Nonlinear PDE $f(p,q) = 0$ Nonlinear PDE $f(p,q,z) = 0$	From 5/7/2021 To	intersperse
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE Method of grouping Method of multipliers Nonlinear PDE $f(p,q) = 0$ Nonlinear PDE $f(p,q,z) = 0$ Nonlinear PDE $f(p,x) = g(q,y)$	From 5/7/2021 To	intersperse with
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE Method of grouping Method of multipliers Nonlinear PDE $f(p,q) = 0$ Nonlinear PDE $f(p,q,z) = 0$ Nonlinear PDE $f(p,x) = g(q,y)$ Clairaut's equation	From 5/7/2021 To	intersperse with
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE Method of grouping Method of multipliers Nonlinear PDE $f(p,q) = 0$ Nonlinear PDE $f(p,q,z) = 0$ Nonlinear PDE $f(p,x) = g(q,y)$ Clairaut's equation PDE reducible to standard form	From 5/7/2021 To	intersperse with
Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE Method of grouping Method of multipliers Nonlinear PDE $f(p,q) = 0$ Nonlinear PDE $f(p,q,z) = 0$ Nonlinear PDE $f(p,x) = g(q,y)$ Clairaut's equation	From 5/7/2021 To	intersperse with
	Properties nverse transforms Finite Fourier transforms OF FIRST ORDER olutionmethodsforpartialdifferentialequation	Fourier integral theorem Fourier sine and cosine integrals Fine and cosine transforms Froperties Inverse transforms Finite Fourier transforms OF FIRST ORDER Colutionmethodsforpartialdifferentialequationsthatmodelphy To Mathematics, Dr. T.K.V.Iyengar; S.Chand publications

63	$x^m y^n$	То	with discussions
64	Method of separation of variables	14/8/2021	
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

K-B weeverledy Signature of Faculty Signature of HOD

PRINCIPAL SRK Institute of Technology ENIKEPADU. VIJAYAWADA-521 108

10 mbilion

Section :E		Page No:	00
Revision No	0:00 Prepared By: B.NAGA JYOTHIRMA		By: HOD
Tools:			
No. of Periods	TOPIC	DATE	Mode of Delivery
UNIT-I	Wave Optics		
	<b>CO1:</b> Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments.		Lecture interspersed
1	INTERFERENCE: Introduction		with discussions
2	Principle of Superposition	From:	
3	Coherent Sources-Types		
4	Interference- Types	10/05/2021	
5	Interference in Thin Films		
6	Colours in Thin Film	To:	
7	Newton's Rings	03/06/2021	
8	Applications of Interference	03/06/2021	
9	Problems		
10	Diffraction: Introduction		
11	Fresnel and Fraunhoffer Diffraction		
12			
13	Fraunhoffer diffraction at single slit Fraunhoffer diffraction at single slit		Lecture
14	Fraunhoffer diffraction at Double Slit		interspersed
15	Fraunhoffer diffraction at N-Slits		with
16	Grating Equation		discussions
17	Dispersive Power of Grating		
18	Resolving Power of Grating		
19	Problems		
20	Polarization: Introduction		
21	Types of Polarization		
22	Polarization by Reflection, Refraction		
23	Polarization by Duoble Refraction		
24	Nicol Prism		
25	Quarter Wave & Half Wave Plates and Problems		
UNIT- II	Lasers and Fiber Optics		
	<b>CO2:</b> Explain various types of emission of radiation.		Lecture
	Identify the role of laser in engineering applications.		interspersed
	Identify the applications of optical fibers in medical,		with
	communication and other fields. Apply the fiber optic		discussions
	concepts in various fields.		
26	Lasers: Introduction		
27	Characteristics of Laser		
28	Spontaneous and Stimulated emission	alda samu, ce	in in its
29	Einstein's Coefficients	on Army on Art	
ioaci30 mus	Population Inversion, Lasing action	and consequent	Charles Billion
31	Pumping Mechanism-Pumping method	lahunguwal <b>a</b>	i ser per si de s

30	Population Inversion, Lasing action		
31	Pumping Mechanism-Pumping method		
32	Ruby Laser		Lecture
33	Helium Neon Laser	To:	interspersed
34	Applications of Lasers	15 06 2021	with
35	Fiber Optics: Introduction	15-06-2021	discussions
36	Principle of Optical Fiber		
37	Acceptance angle and Numerical Aperture		
38	Classifications optical fibers based on refractive index		
	profile and modes		
39	Propagation of electromagnetic wave through optical		
	fibers, applications		
40	Problems		
UNIT -III	Quantum Mechanics, Free Electron Theory and		
	Band theory		
	CO3: Describe the dual nature of matter. Identify the		
	role of Schrodinger's time independent wave equation		
	in studying particle in one-dimensional infinite		
	potential well. Identify the role of classical and		
	quantum free electron theory in the study of electrical		
	conductivity.	From:	
41	Quantum Mechanics: Introduction	17-06-2021	
42	Dual Nature of Matter		\$77
43	Heisenberg's Uncertainty Principle, Significance and	Т-	
	properties of wave function	To 06-07-2021	
44	Schrodinger Time Independent Equation	06-07-2021	Lecture
45	Schrodinger Time Dependent Equation		interspersed
46	Particle in a Box		with
47	Problems		discussions
48	Free Electron Theory: Introduction		aiseassione
49	Classical free electron theory- merits and demerits		
50	Quantum free electron theory- merits and demerits		
51	Equation for electrical conductivity based on quantum		
	free electron theory		
52	Fermi-Dirac distribution, Fermi energy.		
53	Density of states (3D)		
54	Problems		
55	Band theory of Solids :Introduction		
56	Bloch's Theorem, Kronig - Penney model		
57	E vs K diagram - v vs K diagram		
58	Effective Mass of Electron, Concept of Hole		1
59	Energy Bands in Crystalline Solids Classification		
UNIT-IV	Dielectric and Magnetic Materials		
	CO4: Explain the concept of dielectric constant and		
	polarization in dielectric materials. Explain the		
	applications of dielectric and magnetic materials.	<b>.</b>	
(0	Apply the concept of magnetism to magnetic devices.	From	
60	Dielectric Materials: Introduction, Dielectric	08-07-2021	
(1	polarization  Transfer alerizations Electronic relegiation		
61	Types of polarizations- Electronic polarisation		
62	Ionic polarisation, Orientation polarizations		Lecture
63	Lorentz internal field		intersperse
64	Clausius-Mossotti equation, Piezoelectricity.		Intersperse

65	Magnetic Materials: Introduction		with
66	Magnetic dipole moment, Magnetization, Magnetic susceptibility and permeability		discussions
67	Origin of permanent magnetic moment		
68	Classification of magnetic materials: Dia, para, Ferro, antiferro and Ferri magnetic materials	To 24-07-2021	30 a 31 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
69	Domain concept for Ferromagnetism, Domainwalls		
70	Hysteresis soft and hard magnetic materials		
71	Eddy currents, Engineering applications and Problems		
UNIT – V	Semiconductors and Superconductors CO5: Explain the properties of charge carriers in semiconductors. Identify the type of semiconductor using Hall effect. Identify applications of semiconductors in electronic devices. Explain Meissner's effect, BCS theory & Josephson effect in superconductors.	From 26-07-2021	
72	Semiconductors: Introduction, Intrinsic semiconductors	То	
73	Density of charge carriers ,Electrical conductivity, Fermi level	07-08-2021	Lecture interspersed
74	Extrinsic semiconductors, density of charge carriers, Dependence of Fermi energy on carrier concentration and temperature		with discussions
75	Drift and diffusion currents – Einstein's equation		
76	Hall effect, Hall coefficient, Applications of Hall effect		
77	Superconductors: Introduction – Properties of superconductors		
78	Meissner effect, Type I and Type II superconductors		
70	BCS theory, Josephson effects (AC and DC)	in the second	
80	SQUID's – High Tc superconductors, Applications of superconductors		

Signature of Faculty

Signature of HOD

Course T	TENTATIVE LESSON PLAN: R20\ Title: ELECTRICAL CIRCUIT ANALYSIS-I	209	
	: Date: 10-05-2021		of 3
Revision No:	Prepared by : Mr. K.SATYANARAYANA	Approved by :HOD	
17 17 17 17 17 17 17 17 17 17 17 17 17 1	lack board, PPTs		
No.of periods	Topics	Date	Mode of Delivery
CO1: Va TB:Willi	INTRODUCTION TO ELECTRICAL CIRCUITS rious Electrical networks in presence of active and passive and Hayt and Jack E.Kemmerley "Engineering Circuit And		
Company	y, Sixth Edition		
1	Basic Concepts of passive elements of R, L, C and their V-I relations	11.05.21	
2	Basic Concepts of passive elements of R, L, C and their V-I relations	12.05.21	
3	Basic Concepts of passive elements of R, L, C and their V-I relations	13.05.21	
4	Problems	15.05.21	
5	Kirchhoff's laws	18.05.21	
6	Kirchhoff's laws	19.05.21	
7	Problems	20.05.21	1
8	Network reduction techniques (series, parallel, series - parallel, star-to-delta and delta-to-star transformation)	21.05.21	
9	Network reduction techniques (series, parallel, series - parallel, star-to-delta and delta-to-star transformation)	22.05.21	
10	Problems	25.05.21	
11	Problems	26.05.21	
12	Network reduction techniques (series, parallel, series - parallel, star-to-delta and delta-to-star transformation)	27.05.21	Lecture
13	Network reduction techniques (series, parallel, series - parallel, star-to-delta and delta-to-star transformation)	28.05.21	interspersed with discussions
14	Problems	29.05.21	with discussion.
15	source transformation technique	01.06.21	1
16	source transformation technique	02.06.21	1
17	mesh analysis to DC networks with dependent and independent voltage and current sources., node and mesh analysis.	03.06.21	
18	mesh analysis to DC networks with dependent and independent voltage and current sources., node and mesh analysis.	04.06.21	
19	Problems	05.06.21	
20	Problems	08.06.21	
21	Nodal analysis to DC networks with dependent and independent voltage and current sources., node and mesh	09.06.21	

20	Nodal analysis to DC networks with dependent and		
22	independent voltage and current sources., node and mesh	10.06.21	
23	Problems	11.06.21	-
24	Problems	12.06.21	1
UNIT-II	MAGNETIC CIRCUITS	12.00.21	
TB:I.Wi Compan	ole to Understand Any Magnetic circuits with various dot con lliam Hayt and Jack E.Kemmerley " Engineering Circuit An y, Sixth Edition	ventions alysis" Mc(	Graw Hill
25	Introduction to Magnetic Circuits	15.06.21	
26	Basic definition of MMF, flux and reluctance	16.06.21	
27	analogy between electrical and magnetic circuits	17.06.21	
28	Faraday's laws of electromagnetic induction	18.06.21	
29	Faraday's laws of electromagnetic induction	19.06.21	
30	concept of self and mutual inductance	29.06.21	
31	Dot convention	30.06.21	
32	coefficient of coupling and composite magnetic circuit	01.07.21	Lecture
33	coefficient of coupling and composite magnetic circuit	02.07.21	interspersed
34	Problems	06.07.21	with discussions
35	Problems	07.07.21	
36	analysis of series and parallel magnetic circuits	08.07.21	
The second second	analysis of series and parallel magnetic circuits	09.07.21	
37	analysis of series and parallel magnetic circuits	1 09.07.21	
37	Problems	THE CHARLEST STATE OF THE PROPERTY OF THE	
		10.07.21	_
38 39 40 J <b>NIT-II</b> I	Problems Problems Problems SINGLE PAHSE AC SYSTEMS	10.07.21 13.07.21 14.07.21	
38 39 40 UNIT-III CO3: Ab ΓΒ:Willi	Problems Problems Problems	10.07.21 13.07.21 14.07.21	aw Hill
38 39 40 UNIT-III CO3: Ab ΓΒ:Willi	Problems Problems Problems SINGLE PAHSE AC SYSTEMS le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analysmus Problems	10.07.21 13.07.21 14.07.21	aw Hill
38 39 40 UNIT-III CO3: Ab FB:Willi Company	Problems Problems Problems SINGLE PAHSE AC SYSTEMS le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analys, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor)	10.07.21 13.07.21 14.07.21 ons ysis" McGr	aw Hill
38 39 40 UNIT-III CO3: Ab FB: Willi Company	Problems Problems Problems SINGLE PAHSE AC SYSTEMS le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analys, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor) concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks,	10.07.21 13.07.21 14.07.21 ons ysis" McGr	aw Hill
38 39 40 UNIT-III CO3: Ab FB: Willi Company 41	Problems Problems Problems SINGLE PAHSE AC SYSTEMS le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analys, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor) concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations waveforms and phasor diagrams for lagging, leading networks, waveforms and phasor diagrams for lagging, leading networks,	10.07.21 13.07.21 14.07.21 ons ysis" McGr 15.07.21 16.07.21	aw Hill
38 39 40 JNIT-III CO3: Ab TB: Willi Company 41 42 43	Problems Problems Problems  SINGLE PAHSE AC SYSTEMS  le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analys, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor) concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations	10.07.21 13.07.21 14.07.21 0ns ysis" McGr 15.07.21 16.07.21 17.07.21	aw Hill
38 39 40 UNIT-III CO3: Ab FB: Willi Company 41 42 43	Problems Problems Problems SINGLE PAHSE AC SYSTEMS le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analys, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor) concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations waveforms and phasor diagrams for lagging, leading networks, waveforms and phasor diagrams for lagging, leading networks,	10.07.21 13.07.21 14.07.21 14.07.21 ons ysis" McGr 15.07.21 17.07.21 20.07.21 22.07.21	£
38 39 40 UNIT-III CO3: Ab TB: Willi Company 41 42 43 44 45	Problems Problems Problems SINGLE PAHSE AC SYSTEMS le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analyses, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor) concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations node and mesh analysis	10.07.21 13.07.21 14.07.21 0ns ysis" McGr 15.07.21 16.07.21 17.07.21 20.07.21 22.07.21 23.07.21	Lecture
38 39 40 UNIT-III CO3: Ab FB: Willi Company 41 42 43 44 45 46	Problems Problems Problems  SINGLE PAHSE AC SYSTEMS  le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analyses, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor)  concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations  waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations  node and mesh analysis  node and mesh analysis  Problems	10.07.21 13.07.21 14.07.21 14.07.21 0ns ysis" McGr 15.07.21 17.07.21 20.07.21 22.07.21 23.07.21 24.07.21	Lecture interspersed
38 39 40 UNIT-III CO3: Ab TB: Willi Company 41 42 43 44 45 46 47	Problems Problems Problems  SINGLE PAHSE AC SYSTEMS  le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analyses, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor)  concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations  waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations  node and mesh analysis  node and mesh analysis	10.07.21 13.07.21 14.07.21 14.07.21 0ns ysis" McGr 15.07.21 16.07.21 17.07.21 20.07.21 22.07.21 23.07.21 24.07.21 27.07.21	Lecture interspersed
38 39 40 UNIT-III CO3: Ab TB: Willi Company 41 42 43 44 45 46 47 48	Problems Problems Problems SINGLE PAHSE AC SYSTEMS le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analyses, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor) concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations node and mesh analysis node and mesh analysis Problems Steady state analysis of R, L and C circuits Steady state analysis of R, L and C circuits	10.07.21 13.07.21 14.07.21 14.07.21 0ns ysis" McGr 15.07.21 16.07.21 20.07.21 22.07.21 23.07.21 24.07.21 27.07.21 28.07.21	Lecture interspersed
38 39 40 UNIT-III CO3: Ab TB: Willi Company 41 42 43 44 45 46 47 48 49	Problems Problems Problems SINGLE PAHSE AC SYSTEMS le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analysis, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor) concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations node and mesh analysis node and mesh analysis Problems Steady state analysis of R, L and C circuits	10.07.21 13.07.21 14.07.21 14.07.21 20.07.21 15.07.21 17.07.21 20.07.21 22.07.21 23.07.21 24.07.21 27.07.21 28.07.21 29.07.21	Lecture interspersed
38 39 40 UNIT-III CO3: Ab TB: Willi Company 41 42 43 44 45 46 47 48 49 50	Problems Problems Problems  SINGLE PAHSE AC SYSTEMS  le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analysts, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor)  concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations node and mesh analysis node and mesh analysis Problems  Steady state analysis of R, L and C circuits Steady state analysis of R, L and C circuits Steady state analysis of R, L and C circuits	10.07.21 13.07.21 14.07.21 14.07.21 0ns ysis" McGr 15.07.21 16.07.21 17.07.21 20.07.21 22.07.21 23.07.21 24.07.21 27.07.21 28.07.21 29.07.21 30.07.21	Lecture interspersed
38 39 40 UNIT-III CO3: Ab TB: Willi Company 41 42 43 44 45 46 47 48 49 50 51	Problems Problems Problems  SINGLE PAHSE AC SYSTEMS  le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analys, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor)  concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations  waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations  node and mesh analysis  node and mesh analysis  Problems  Steady state analysis of R, L and C circuits  Steady state analysis of R, L and C circuits  Steady state analysis of R, L and C circuits  Steady state analysis of R, L and C circuits  power factor and its significance  real, reactive and apparent power	10.07.21 13.07.21 14.07.21 14.07.21 20.07.21 15.07.21 17.07.21 20.07.21 22.07.21 24.07.21 24.07.21 28.07.21 29.07.21 30.07.21 30.07.21 01.08.21	Lecture
38 39 40 UNIT-III CO3: Ab TB: Willi Company 41 42 43 44 45 46 47 48 49 50 51 52	Problems Problems Problems  SINGLE PAHSE AC SYSTEMS  le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analys, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor)  concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations node and mesh analysis node and mesh analysis Problems  Steady state analysis of R, L and C circuits Steady state analysis of R, L and C circuits Steady state analysis of R, L and C circuits power factor and its significance	10.07.21 13.07.21 14.07.21 14.07.21 20.07.21 16.07.21 17.07.21 20.07.21 22.07.21 23.07.21 24.07.21 27.07.21 28.07.21 29.07.21 30.07.21 01.08.21 02.08.21	Lecture interspersed
38 39 40 UNIT-III CO3: Ab FB:Willi Company 41 42 43 44 45 46 47 48 49 50 51 52 53	Problems Problems Problems  SINGLE PAHSE AC SYSTEMS  le to understand any R,L,C network with sinusoidal excitation am Hayt and Jack E.Kemmerley "Engineering Circuit Analys, Sixth Edition  Periodic waveforms (determination of rms, average value and form factor)  concept of phasor, phase angle and phase difference waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations  waveforms and phasor diagrams for lagging, leading networks, complex and polar forms of representations  node and mesh analysis  Problems  Steady state analysis of R, L and C circuits Steady state analysis of R, L and C circuits Steady state analysis of R, L and C circuits Steady state analysis of R, L and C circuits power factor and its significance real, reactive and apparent power waveform of instantaneous power and complex power	10.07.21 13.07.21 14.07.21 14.07.21 20.07.21 15.07.21 17.07.21 20.07.21 22.07.21 24.07.21 24.07.21 28.07.21 29.07.21 30.07.21 30.07.21 01.08.21	Lecture interspersed

### UNIT-IV RESONANCE-LOCUS DIAGRAMS

CO4: Able to understand any R,L network with variation of any one of the parameters i.e.R,L,C and frequency.

TB: William Hayt and Jack E.Kemmerley "Engineering Circuit Analysis" McGraw Hill Company, Sixth Edition

57	Series Resonance and selectively Bandwidth and Quality Factor	10.08.21	
58	Parallel Resonance and selectively Bandwidth and Quality Fact	11.08.21	
59	Problems	12.08.21	
60	Problems	13.08.21	Lecture
61	locus diagram- RL, RC, RLC with R, L and C variables	14.08.21	interspersed
62	locus diagram- RL, RC, RLC with R, L and C variables	17.08.21	with discussions
63	locus diagram- RL, RC, RLC with R, L and C variables	18.08.21	With discussions
64	Problems	19.08.21	
65	Problems	20.08.21	
TIMIT V	NETWORK THEODENS OF COLUMN	20.00.21	

### UNIT-V NETWORK THEOREMS (DC & AC EXCITATIONS)

CO5: Able to understand Electrical networks by using principles of network theorems. TB: William Hayt and Jack E. Kemmerley "Engineering Circuit Analysis" McGraw Hill Company, Sixth Edition

66	Superposition theorem	21.08.21	
67	Superposition theorem	24.08.21	
68	Problems	25.08.21	
69	Thevenin's theorem	26.08.21	
70	Thevenin's theorem	27.08.21	
71	Problems	28.08.21	
72	Norton's theorem	31.08.21	Lecture
73	Norton's theorem	01.09.21	interspersed
74	Problems	02.09.21	with discussion
75	Maximum Power Transfer theorem	03.09.21	with discussion
76	Problems	04.09.21	
77	Reciprocity theorem	07.09.21	
78	Millman's theorem	08.09.21	
79	compensation theorem	09.09.21	
80	Problems	09.09.21	

K. Salgen ral 10/5/21 Signature of the Faculty

TENTATIVE LESSON PLAN(R201212)

Course	Title:Object Oriented Programming through JA	VA	
Section A and I	Data:10 5 2021	Page No: 1 o	of 2
Revision No:	Prepared by : CH SIVA RAJESH	Approved by :HOD	
Tools:	PPTs		
No.of periods	Topics	Date	Mode of Delivery
UNIT-I	Basics of Object Oriented Programming (OOP	)	2011, 613
CO1 : U	nderstanding the basics of Programming		
TB:: Pro	gramming in JAVA, Sachin Malhotra, Saurabh	Choudary, Oxford	
1	Basics of Java programming	10-05-2021	
2	Data types	11-05-2021	+
3	Variables	12-05-2021	+
4	Operators	15-05-2021	
5	Control structures including selection, Looping	17-05-2021	
6	Overloading	18-05-2021	T
7	Arrays in java	19-05-2021	Lecture
8	Basics of objects and classes in java	21-05-2021	interspersed
9	Constructors		with discussion
10	Finalizer, Visibility modifiers	22-05-2021	
11	Methods and objects	24-05-2021	
12	Inbuilt classes like String, Character, StringBuffer	25-05-2021	
13	File, this reference.	28-05-2021	
NIT-II	JAVA Basics	29-05-2021	
O2 : Un	derstanding the inheritance and its types		
14	gramming in JAVA, Sachin Malhotra, Saurabh C	Choudary, Oxford	
	Inheritance in java	31-05-2021	
16	Super and sub class	01-06-2021	
	Overriding	02-06-2021	
	Object class	04-06-2021	
	Polymorphism	05-06-2021	
	Dynamic binding	07-06-2021	Lecture
	Generic programming	08-06-2021	interspersed
	Casting objects, Instance of operator	09-06-2021	with discussions
	Abstract class	11-06-2021	
	nterface in java	12-06-2021	
	Package in java	14-06-2021	
25	JTIL package	15-06-2021	
NIT-III	Inheritance		
03 : Und	lerstanding how to work with GUI components ramming in JAVA, Sachin Malhotra, Saurabh Cl		
3:: Prog	a out min manuella. Sanrann (	uoudary, Oxford	
3:: Prog		, oaloru	
26 E	vent handling in java  Mouse and key events	16-06-2021	

#### UNIT-III Trees

CO1: Understanding traversal methods in the Trees.

TB:: Fundamentals of Data Structures in C, 2nd Edition, E.Horowitz, S.Sahni and Susan Anderson Freed, Universities Press Pvt. Ltd

26	Terminology	19-06-2021
27	Representation of Trees	28-06-2021
28	Binary Trees-Properties of Binary Trees	29-06-2021
29	Binary Tree Representations	30-06-2021
30	Preorder-Inorder and Postorder Traversal-	02-07-2021
31	ThreadsThread Binary Trees	03-07-2021
32	Balanced Binary Trees	05-07-2021
33	Heaps-Max Heap	06-07-2021
34	Insertion into and Deletion from a Max Heap	07-07-2021
35	-Binary Search Trees-Searching	08-07-2021
36	Insertion and Deletion from a Binary Search Tree	09-07-2021
37	Height of Binary Search Tree	12-07-2021
38	m-way Search Trees	13-07-2021
39	B-Trees	13-07-2021

#### UNIT-IV Graphs

CO1: Understanding various algorithms available for the graphs

TB:: Fundamentals of Data Structures in C, 2nd Edition, E.Horowitz, S.Sahni and Susan Anderson Freed, Universities Press Pvt. Ltd

40	Graph Theory Terminology	14-07-2021	
41	Graph Representation-Graph Operations	and the state of t	
42	Depth First Search	14-07-1021	
43	Breadth First Search	15-07-2021 16-07-2021	-
44	Connected Components	16-07-2021	+
45	Spanning Trees-Biconnected Components	19-07-2021	Lecture
46	Minimum Cost Spanning Trees	19-07-2021	interspersed
47	Kruskal's Algorithm	20-07-1921	with discussions
48	Prism's Algorithm	22-07-1921	
49	Shortest Paths-Transitive Closure	23-07-2921	
50	AllPairs Shortest Path		
51	Warshall's Algorithm	26-07-2021 26-07-2021	
TIMITE X		20-07-29.21	

### UNIT-V Searching and Sorting

CO1: Understanding sorting and searching in the data ret retrival applications

TB:: Fundamentals of Data Structures in C, 2nd Edition, E.Horowitz, S.Sahni and Susan Anderson Freed, Universities Press Pvt. Ltd

52	Searching -Linear Search		
53	Binary Search	27-07-2021	
54		28-07-2021	
	Fibonacci Search	29-07-2021	
55	Hashing-Sorting-Definition	30-07-1921	
56	Bubble Sort	02-08-2021	
57	Insertion sort		Lecture
58	Selection Sort	02-08-2921	
	Selection Soft	03-08-1021	interspersed

59	Quick Sort	03-08-2021	Mini discussions
60	Merging-Merge Sort-Iterative and Recursive Merge	04-08-2021	
61	Shell Sort	04-08-2021	
62	Radix Sort	05-08-2021	
63	Heap Sort	06-08-2021	

Jul 17/5/21

Signature of the Faculty

Signature of the HOD

### **TENTATIVE LESSON PLAN: CIVIL R201227**

		C CIVIL AND MECHANICAL ENGINE		01 - 602
Section : S		Date: 10-05-2021		: 01 of 03
Revision N	o:00   P	Prepared By :A.KRISHNA PRIYA		ed By : HOD
		Tools: Black board, PPT	l's	
No. of Periods		TOPIC	Date	Mode of Delivery
UNIT -I				
CO1: Apply supported b	eams.	orce diagram & Bending moment diagram printerials by <b>R.K.Bansal</b>	nciples for Cantile	ever and Simply
1.	Basic de	efinitions of force-stress,strain	11-05-2021	
2.	Elastici	ty,shear force and bending moment	12-05-2021	
3.		simple problems related to shear force and moment for cantilever beam	13-05-2021	Lecture interspersed
4.	moment	problems related to shear force and bending t for simply supported beam	15-05-2021	with discussions
5.	cantilev	ns on shear force and bending moment for eer beam	18-05-2021	
6.		ns on shear force and bending moment for ver beam	19-05-2021	
7.		ns on shear force and bending moment for ver beam	20-05-2021	
8.		ns on shear force and bending moment for supported beam	21-05-2021	
9.		ns on shear force and bending moment for supported beam	22-05-2021	
10.		ns on shear force and bending moment for supported beam	25-05-2021	
11.	Tutori	al	26-05-2021	
TB: Basic	ly concept Civil engi	s of Rosette analysis for strain measurements.	107.05.0001	
12.		ction to strain,Measurement of strain	27-05-2021	
13.		al capacitance	28-05-2021	
14.		nce strain gauges	29-05-2021	
15.		nce strain gauges	01-06-2021	
16.		hannel strain indicators	02-06-2021	
17.	rosette	analysis Rectangular and triangular strain	03-06-2021	Lecture intersperse
18.	rosette	analysis Rectangular and triangular strain	04-06-2021	with discussions
19.	Tutori	al	05-06-2021	
	lyse the cl	haracteristics of common building materials.	Drof M Drobboko	
20.		Mechanical Engineering, by Prof.V.Vijayan, ction to building materials	08-06-2021	7
21.		teristics of common building materials	09-06-2021	
22.	Introdu	ction to bricks	10-06-2021	

Types of bricks

Testing on bricks

23.

24.

11-06-2021

12-06-2021

27.	Seasoning and defects in timber	17-06-2021		
28.	Introduction to glass	18-06-2021	Lecture intersperse	
29.	Clasification and uses of glass	19-06-2021	with discussions	
30.	Introduction to steel	29-06-2021		
31.	Steel applications in construction industry	30-06-2021		
32.	Tutorial	01-07-2021		
UNIT -IV	Hydraulic Turbines And Pumps:			
CO4: Compare	the working characteristics of Internal Combustion engines	S.		
IB: Elements of	of Mechanical Engineering Fourth Edition S Trymbaka M		ess.	
33.	Introduction to power transmission tools	02-07-2021		
34.	Hydraulic turbines	03-07-2021	Lastura interconnect	
35.	Classification of turbines	06-07-2021	Lecture interspersed with discussions	
36.	Difference between impulse and reaction turbine	07-07-2021	With discussions	
37.	Pumps: classification of pumps	08-07-2021		
38.	Centrifugal pump applications	09-07-2021		
39.	Priming – reciprocal pumps	10-07-2021		
40.	Single and double acting pumps	13-07-2021		
41.	Comparision with centrifugal pumps	14-07-2021		
42.	Tutorial	15-07-2021		
TB: Elements o	of Mechanical Engineering Fourth Edition S Trymbaka M Introduction to ic engines	lurthy, University Pr	ess.	
44.	Heat engine	17-07-2021		
45.	Types of heat engine	20-07-2021		
46.	Classification of ic engine	22-07-2021		
47.	Engine-valve timing diagram	23-07-2021		
48.	Port timing diagram	24-07-2021	I active interes and	
49.	Comparision of 2s & 4s engines	27-07-2021	Lecture interspersed with discussions	
50.	Comparison of 25 & 45 engines  Comparison of petrol engine & dieel engine	28-07-2021	with discussions	
51.	Fuel system of a petrol engine	29-07-2021		
52.	Ignition systems	30-07-2021		
53.	Introduction to boilers, clarification of boilers	31-07-2021		
54.	indication to boners, cialineation of boners	31-07-2021		
55.		02 00 2021		
56.	Simple vertical boiler	03-08-2021		
.)().	Simple vertical boiler Cochran boiler	04-08-2021		
	Simple vertical boiler  Cochran boiler  Bobcock and Wilcox benson boiler	04-08-2021 05-08-2021		
57.	Simple vertical boiler  Cochran boiler  Bobcock and Wilcox benson boiler  Difference between fire tube and water tube boiler	04-08-2021 05-08-2021 06-08-2021		
	Simple vertical boiler  Cochran boiler  Bobcock and Wilcox benson boiler	04-08-2021 05-08-2021		

Signature of the Faculty

Signature of the HOD

PRINCIPAL

Course Title: MATHEMATICS - II

Section: N	<b>ЛЕСН</b>	Date: 10-05-2021	Page No	:01 of 02
Revision No		Prepared By : K.BASAVARAJU	Approve	ed By: HOD
Tools: Blac No. of Peric		PPT'S, MS Teams TOPIC	Date	Mode of Delivery
VECTORS CO1: solve: Seidel (L3) TB:" Engin	system of eering M	STEM OF LINEAR EQUATIONS, EIGEN Vinear algebraic equations using Gauss elimetathematics", Dr. T.K.V.Iyengar; S.Chand	ination, Gauss Jo	
1	Intr	oduction to matrices	+	
2	Ran	k of matrix- definition, properties		
3	Pro	blems on rank by Echelon form		Lecture interspersed with discussions
4	Ran	k by normal form	<del> </del>	
5	PAG	Q form problems		
6	Hor	nogeneous system AX=0		
7	Nor	Homogeneous system AX=B		
8	Pro	blems on rank method	From:	
9	Gau	ass Elimination method	10-05-2021	
10	Eige	en values – definition	To:	
11	Pro	perties of Eigen values	29-05-2021	
12	Pro	perties of Eigen values		
13	Pro	blems on finding eigen values, vectors		
14	Pro	blems on finding eigen values, vectors		
CO2: Develor applications	op the us (L6)	HAMILTON THEOREM, QUADRATIC FOR e of matrix algebra techniques that is needed at the matrics", Dr. T.K.V.Iyengar; S.Chand 1	l by engineers for	r practical
ть: Engine		ey Hamilton theorem, verification, problems	publications	

16	Finding inverse and power of a matrix by caley Hamilton theorem	one of the second secon	NTI of Grand with 31 had
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	31-05-2021	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	12-06-2021	
22	Orthogonal reduction method		
23 .	Congruent operations method .		
24	Lagrange's method		
25	Problems on finding nature of a QF		

#### UNIT-III: UNIT – III: ITERATIVE METHODS:

CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)

TB: "Engineering Mathematics", Dr. T.K.V. Iyengar; S. Chand publications

	ing interest , and interest program of the program		
26	Introduction	From:	
27	Method – 1: Bisection method		
28	Problems	14-06-2021	
30	Method – 2: Regula falsi method		
31	Problems	To:	
33	Method – 3: Iteration method		
34	Problems	19-06-2021	Lecture
35	Method – 4: Newton Raphson method	_ &	interspersed
36	Problems	From:	with
37	Newton Raphson method simultaneous equations	20.06.2021	discussions
38	Gauss Jacobi Method	28-06-2021	
39	Gauss Seidal Method	То:	
40	problems	07-07-2021	

#### **UNIT – IV: INTERPOLATION**

CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

41	Introduction: Forward and Backward Differences		
----	--	--	--

42	Newton's Forward interpolation formula	the safety of the same of the same	2 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems	00.07.2021	interspersed
47	Problems	08-07-2021	with discussions
48	Gauss Backward interpolation formula – Problems	То:	uiseussions
49	Problems	24-07-2021	
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		

# UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION

CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

53	Trapezoidal rule	P=====================================	
33	Trapezoidai ruic		
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule	_	
57	Taylor's series method	— From:	Lecture interspersed
58	Problems	26-07-2021.	with discussions
59	Picard's method of successive approximation	To:	
60	Euler's method	07-08-2021	
61	Euler's modified method		1000
62	Problems		
63	Runge kutta method		
64	Problems		

K. Bweverling
Signature of Faculty

Signature of HOD

## **Tentative Lesson Plan: R201202**

Course Title: ENGI	NEERING CHEMISTRY	
Section : MECHANICAL	Date:11-5-2021	Page No: 3
Revision No:	Prepared By: B.SOWJANYA	Approved By : HOD

Tools:

No. of Periods	TOPIC	Date	Mode of
1,01,01,01			Delivery

S.NO	TOPIC		
	UNIT -I HIGH POLYMERS AND PLA	STICS	
	ortance of usage of plastics in household appliances and co	omposites(FRP) ir	aerospace
ind autom	otive industries.		
1.	Polymerisation:- Introduction		
2.	Mechanism of polymerization		
3.	Stereo regular polymers		
4.	Methods of polymerization(emulsion and suspension)	From: 11-5-21	
5.	Physical and mechanical properties	T 05 5 01	T
6.	Advantages and limitations of plastics	To:25-5-21	Lecture
7.	Thermoplastics and Thermosetting plastics		Intersperse
8.	Compounding of plastics		With Discussion
9.	Fabrication (4/5 techniques) of plastics		Discussion
10.	Preparation, properties and applications of PE,PVC		
11	Bakelite Teflon and polycarbonates		
12	Elastomers :- Natural rubber- compounding		
13	Vulcanization – Synthetic rubbers : Buna S, Buna N,		
14	Thiokol ,polyurethanes -Applications of elastomers		
15	Composite materials & Fiber reinforced plastics		
16	Biodegradable polymers – Conducting polymers.		
	UNIT-II		
ELECTR	OCHEMICAL CELLS AND CORROSION		
	tline the basics for the construction of		
	tillio the basies for the constitution of		
electroche			
	emicalcells, batteries and fuelcells. Understand the		
mechanis	emicalcells, batteries and fuelcells. Understand the m of corrosion and how it can be prevented.		Lecture
mechanisi 17	emicalcells, batteries and fuelcells. Understand the m of corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells		Intersperse
mechanis	emicalcells, batteries and fuelcells. Understand the m of corrosion and how it can be prevented.	From: 26-5-21	Intersperse With
nechanisi 17 18	emicalcells, batteries and fuelcells. Understand the m of corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses		Intersperse With
mechanisi 17	emicalcells, batteries and fuelcells. Understand the mof corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses  Standard electrodes (Hydrogen and Calomel	From: 26-5-21 To:15-6-21	Intersperse With
17 18 19	emicalcells, batteries and fuelcells. Understand the mof corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses  Standard electrodes (Hydrogen and Calomel electrodes)		Intersperse With
17 18 19 20	emicalcells, batteries and fuelcells. Understand the m of corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses  Standard electrodes (Hydrogen and Calomel electrodes)  Concentration Cells -Batteries: Dry Cell - Ni-Cd cells		Intersperse With
17 18 19	emicalcells, batteries and fuelcells. Understand the mof corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses  Standard electrodes (Hydrogen and Calomel electrodes)		Intersperse With
17 18 19 20 21	emicalcells, batteries and fuelcells. Understand the m of corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses  Standard electrodes (Hydrogen and Calomel electrodes)  Concentration Cells -Batteries: Dry Cell - Ni-Cd cells  Ni-Metal hydride cells - Li cells - Zinc – air cells.  Fuel Cells		Intersperse With
17 18 19 20 21	emicalcells, batteries and fuelcells. Understand the of corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses  Standard electrodes (Hydrogen and Calomel electrodes)  Concentration Cells -Batteries: Dry Cell - Ni-Cd cells  Ni-Metal hydride cells - Li cells - Zinc – air cells.  Fuel Cells  Corrosion: - Definition – Theories of Corrosion		Intersperse With
17 18 19 20 21 22 23	emicalcells, batteries and fuelcells. Understand the m of corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses  Standard electrodes (Hydrogen and Calomel electrodes)  Concentration Cells -Batteries: Dry Cell - Ni-Cd cells  Ni-Metal hydride cells - Li cells - Zinc – air cells.  Fuel Cells  Corrosion: Definition – Theories of Corrosion  Formation of galvanic cells by different metals		Intersperse With
17 18 19 20 21	emicalcells, batteries and fuelcells. Understand the of corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses  Standard electrodes (Hydrogen and Calomel electrodes)  Concentration Cells -Batteries: Dry Cell - Ni-Cd cells  Ni-Metal hydride cells - Li cells - Zinc – air cells.  Fuel Cells  Corrosion: Definition – Theories of Corrosion  Formation of galvanic cells by different metals  concentration cells, differential aeration, waterline		Intersperse
17 18 19 20 21 22 23	emicalcells, batteries and fuelcells. Understand the m of corrosion and how it can be prevented.  Galvanic cells - Reversible and irreversible cells  Single electrode potential – Electro chemical series and uses  Standard electrodes (Hydrogen and Calomel electrodes)  Concentration Cells -Batteries: Dry Cell - Ni-Cd cells  Ni-Metal hydride cells - Li cells - Zinc – air cells.  Fuel Cells  Corrosion: Definition – Theories of Corrosion  Formation of galvanic cells by different metals		Intersperse With

	series		
26	Factors which influence the rate of corrosion		
27	Protection from corrosion - Design and material		
	selection	a transfer and the second transfer	
28	Cathodic protection - Metallic (cathodic & anodic)		
	coatings		
29	(Galvanizing, Tinning, Electroplating, Electroless		
	plating)		
	CHEMISTRY OF MATERIALS	From: 166-	
	ress the increase in demand as wide variety of advanced	21	
	are introduced; which have excellent engineering	T.	
	Classify and discuss the materials used in major	To:	
	like steel industry, metallurgical industries and	20-6-21	
	n industries and electrical equipment manufacturing		
industries. I	Lubrication is also summarized.		
30	Part- A: Nano materials:-		Lecture
30	Introduction-sol-gel method-characterization by BET,		Interspersed
	SEM	From: 28-6-	
31	and TEM methodsapplications of graphene-carbon	21	With
	nanotubes		<u> </u>
32	and fullerenes:Types, preparation and applications	To:	Discussions
22	Thermal	7-7-21	
33	analysis techniques: Instrumentation and applications of		
34	thermogravimetric analysis (TGA), differential	-	
34	thermal		
35	analysis (DTA), differential scanning calorimetry	-	
33	(DSC).		
36	Part-B: Refractories: - Definition, classification,	1	Lecture
30	properties),		Beetare
37	refractoriness, refractoriness under load, porosity		Interspersed
38	(and thermal spalling), failure of refractories.		With
	Lubricants: -		
39	Definition, mechanism of lubricants and properties		Discussions
	(definition		
UNIT IV:	FUEL TECHNOLOGY		
CO4:	Relate the need of fuels as a source of energy to any		
inc	dustry, particularly industries like thermal power stations,		
ste	eel industry, fertilizer industry etc., and hence introduced.		
40	Fuels – Introduction – Classification –	From: 08-7-21	
41	Calorific value - HCV and LCV - Dulong's formula		
42	Bomb calorimeter – Numerical problems	To:	Lecture
43	Coal - Proximate and ultimate analysis - Significance	26-7-21	Interspersed
44	Liquid fuels – Petroleum- Refining		With
45	Cracking- Synthetic petrol		Discussions
46	Petrol ,Diesel knocking - Octane and Cetane ratings		
47	Anti-knock agents – Power alcohol – Bio-diesel		
48	Gaseous fuels – Natural gas, LPG and CNG		

49	Combustion – Calculation of air for the combustion of a fuel		
50	Flue gas analysis, Orsat apparatus problems on combustion		
51	Explosives:- Rocket fuels		
UNIT V: WATER TECHNOLOGY		From: 28-7-21	
CO5	: Explain the importance and usage of water as basic		
material in almost all the industries; interpret drawbacks of		To:	
steam boilers and also how portable water is supplied for		07-8-21	
	ing purposes.		
52	Determination of hardness by complexometric method		
53	Boiler troubles (priming and foaming, scale formation,		Lecture
	boiler corrosion		T , 1
54	caustic embrittlement)-internal treatments- softening of hard water		Interspersed
55	zeolite processs and related sums, ion exchange process		With
56	Treatment of industrial waste water Portable water and its specifications-steps involved in purification of water-		Discussions
57	chlorination, break point chlorination-reverse osmosis and electro dialysis		

"Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.

B. Sowjanyer Signature of Faculty Signature of HOD

### TENTATIVE LESSON PLAN: R201210 ENGINEERING MECHANICS

Course Title: El	NGINEERING MECHANICS	Course code	: R201210	
Section : Sec I	Date: 10/05/2021	Page N	o: 01 to 03	
Revision No : 00	Prepared By: R. KIRAN KUMAR	Approv	Approved By: HOD	
Tools: MS TEA	MS, GOOGLE MEET, PPT'S			
S.NO	TOPIC	Date	Mode of Delivery	
UNIT-IINTROI	DUCTION TO ENGG. MECHANICS, SYSTEM	<b>IS OF FORC</b>	ES	
CO1:Become fa	miliar with a basic concepts of force and friction	, direction a	nd its	
application	on.			
TB: "ENGINEEI	RING MECHANICS", S.S BHAVIKATTI, 1st Edition	n, New age pul	olications, 2012	
1	UNIT - 1 Introduction, Basic terminologies			
2	Laws of mechanics			
3	Systems of Forces			
4	Resultant of Forces, Parallelogram law,	-		
5	Parallelogram law problems			
6	Resolution method- concurrent forces, Problems			
7	Problems	_	Lecture	
8	Moment of force, couple, Varignon's theorem	From:	intersperse	
9	Resolution of force to a force and couple,	10/05/2021	with	
	Parallel forces and problems	Total	discussion	
10	Resultant of concurrent system in space	To: 29/05/2021	Online	
11	Resultant of concurrent system in space-	29/03/2021	Teaching	
	problems			
	Friction introduction, coefficient of friction,			
12	coulomb's laws of dry friction, cone of friction,			
	angle of friction, Problems			
13	Problems, wedge friction problem			
14	Ladder problem			
UNIT-II	<b>EQUILIBRIUM OF SYSTEMS OF FORCES</b>			
CO2: Gain kno	wledge about free body diagrams. Solution to pr	oblems using	graphical	
	and law of triangle of forces.			
	RING MECHANICS", S.S BHAVIKATTI, 1st Edition	n, New age pu	blications, 2012	
15	Equilibrium of system of forces	-	T	
16	Equilibrium of system of forces problems	From:	Lecture	
17	Problems	31/05/2021		
18	Problems- In space	To:	with discussion	
19	Problems – Beams	12/06/2021		
20	Graphical method of analysis	12/00/2021	Teaching	
20				

25	Problems – Beams		Online
26	Graphical method of analysis		Teaching
CO3:Become	ENTROID, CENTRE OF GRAVITY  familiar with the concepts of centre of gravity, concepts  ERING MECHANICS", S.S BHAVIKATTI, 1st Edition,		
27	UNIT – 3 Centroids of simple figures	l go passe	
28	Problems		
29	Problems		
30	Problems		
31	Centroids of Composite Figures		
32	Problems		
33	Problems		
34	Problems		Lecture
35	Problems	From:	interspersed
26	Pappus theorem – theorem 1	14/06/2021	with
36	Pappus theorem – theorem 2	<b>T</b>	discussions
37	Centre of gravity of simple body, right circular cone	To: 15/07/2021	Online Teaching
38	Types of friction, limiting friction		· ·
39	Laws of friction, Static & Dynamic friction		
40	Problems		
41	Problems		
42	Wedge friction		
43	Problems .		
44	problems		
UNIT-IV A	AREA MOMENTS OF INERTIA, MASS MOMENT	OF INERTIA	
ransfer metl	nowledge about moment of inertia and polar momen hods and their applications. ERING MECHANICS", S.S BHAVIKATTI, 1st Edition		
45	UNIT – 4 Area Moment of Inertia Definition, Polar Moment of Inertia, Transfer Theorems		
46	Moments of Inertia of Composite Figures- problems		
47	Moments of Inertia of Composite Figures- problems	From:	Lecture interspersed
48	MI- problems	16/07/2021	with discussions
49	MI- problems	To	
50	Mass moment of inertia of basic bodies – rod, rectangular plate	10: 31/07/2021 0	Online Teaching
51	Mass moment of inertia of basic bodies – circular plate, solid cone		
52	Mass moment of inertia of basic bodies – solid sphere		
UNIT-V I		ear paths,	its

acceleration and particle	computation and methods of representing plane	motion, work, en	ergy
	ERING MECHANICS", S.S BHAVIKATTI, 1st Edi	ition, New age publi	cations, 2012.
53	UNIT – 5 Kinematics, Introductions		,
54	Rectilinear and curvilinear motions		
55	Velocity and acceleration		
56	Motion of rigid body		
57	Analysis in plane motion		
58	problems		
59	problems		
60	problems		
61	problems		Lecture
62	problems	From:	interspersed
63	Kinetics ·	02/08/2021	with ·
64	D'Alembert's principle	To:	discussions
65	Kinetics - Analysis of body in translation	14/08/2021	Online
66	Analysis of body in rotation	14/08/2021	Teaching
67	Work, energy and power		
68	Principle of conservation of energy	909	
69	problems		
70	problems		
71	Principle of work energy		
72	Principle of Impulse-momentum		
73	problems		
74	problems		

Signature of Faculty

Signature of HOD

PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108 TENTATIVE LESSON PLAN: MECHANICAL - 2001011

Course Title: BASIC ELECTRICAL AND ELECTRONICS ENGINEERING (BEEE)

Section: Sec A Date: 10-05-2021

section : 3	sec A	Date: 10-05-2021	Page No: 0	1 01 02
Revision No	o:00	Prepared By :Mr.S.NAGESWARA RAO	Approved I	
Tools: MS To	eams, P	PTs		
No. of		TOPIC	Date	Mode of
Periods			(Planned)	Delivery
(Planned)				
UNIT –I		CTRICAL CIRCUITS		
		asic principles of electrical law's and analysis		
TB :: Circu	iits and	l networks by A. Sudhakar , Shyammohan S l	Palli	
1	Bas	ic Definitions		
2	Typ	es of network elements		
3		ns law	From:	
4	Kire	chhoff's law	10-05-2021	Online Classes
5	Indi	active networks	To:	with MS
6	Cap	acitive networks	22-05-2021	Teams
7	Seri	es, parallel circuits		
8		-delta and delta-star transformations		
9		nerical Problems		
10	Tute	orial		
UNIT -II		MACHINES		
		the principle of operation and construction of	datails of da mass	L:
TP Floor		and construction (	details of ue mae	mines.
	rical T			
		echnology by M S Naidu, S Kamakshaiah		
TB:: Electr	ical Te	chnology by U.A.Bakshi		
TB:: Electr	ical Te	chnology by U.A.Bakshi oduction		
TB:: Electr 11 12	Intro	chnology by U.A.Bakshi oduction ciple of operation of DC generator		
TB:: Electr 11 12 13	Intro Prin	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation		
TB:: Electr 11 12 13 14	Intro Prin EM Typ	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine	Evonu	
TB:: Electr  11  12  13  14  15	Intro Prin EM Typ	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation	From:	
TB:: Electr  11 12 13 14 15 16	Intro Prin EM Typ Toro Cha	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors	24-05-2021	with MS
TB:: Electr  11 12 13 14 15 16 17	Intro Print EM Typ Toro Cha App	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications	To:	
TB:: Electr  11 12 13 14 15 16 17 18	Intro Prin EM Typ Toro Cha App	chnology by U.A.Bakshi eduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter	24-05-2021	with MS
TB:: Electr  11 12 13 14 15 16 17 18 19	Intro Prin EM Typ Toro Cha App Thro Spee	chnology by U.A.Bakshi eduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor	To:	with MS
TB:: Electr  11 12 13 14 15 16 17 18 19 20	Intro Print EM Typ Toro Cha App Thro Spec	chnology by U.A.Bakshi  Eduction Ciple of operation of DC generator  F equation Es of DC machine Que equation Fracteristics of DC motors Clications Es point starter Ed control methods of DC motor Chburne's Test	To:	with MS
TB:: Electr  11 12 13 14 15 16 17 18 19 20 21	Intro Print EM Typ Toro Cha App Thre Spec	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor aburne's Test	To:	with MS
TB:: Electr  11 12 13 14 15 16 17 18 19 20 21 22	Intro Prin EM Typ Toro Cha App Thro Spec Swin Brak	chnology by U.A.Bakshi eduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor aburne's Test te Test herical Problem	To:	with MS
TB:: Electr  11 12 13 14 15 16 17 18 19 20 21 22 23	Intro Print EM Typ Toro Cha App Thre Spec Swin Brak Nun Tuto	chnology by U.A.Bakshi  Eduction Ciple of operation of DC generator  F equation Es of DC machine Que equation Fracteristics of DC motors Control methods of DC motor	To:	with MS
TB:: Electr  11 12 13 14 15 16 17 18 19 20 21 22 23 UNIT - III	Intro Prin EM Typ Toro Cha App Thro Spec Swin Brak Nun Tuto	chnology by U.A.Bakshi Eduction Ciple of operation of DC generator F equation Es of DC machine Que equation Fracteristics of DC motors Control methods of DC motor	24-05-2021 To: 05-06-2021	Teams
TB:: Electr  11  12  13  14  15  16  17  18  19  20  21  22  23  UNIT - III  CO3:: Under	Intro Prin EM Typ Toro Cha App Thro Spec Swin Brak Nun Tuto AC erstand	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor aburne's Test te Test herical Problem rial MACHINES: TRANSFORMER the principle of operation and construction de	24-05-2021 To: 05-06-2021	with MS Teams
TB:: Electr  11 12 13 14 15 16 17 18 19 20 21 22 23 UNIT - III CO3:: Under	Intro Prin EM Typ Toro Cha App Thre Spec Swin Brak Nun Tuto AC erstand	chnology by U.A.Bakshi Eduction Ciple of operation of DC generator F equation Es of DC machine Gue equation Fracteristics of DC motors Control methods of DC motor Control	24-05-2021 To: 05-06-2021	with MS Teams
TB:: Electr  11 12 13 14 15 16 17 18 19 20 21 22 23 UNIT - III CO3:: Under TB:: Electrical Electric	Intro Prin EM Typ Toro Cha App Thro Spec Swin Brak Nun Tuto AC erstand ical Te	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor aburne's Test te Test terical Problem orial EMACHINES: TRANSFORMER I the principle of operation and construction dechnology by M.S. Naidu, S. Kamakshaiah echnology by U.A.Bakshi	24-05-2021 To: 05-06-2021	with MS Teams
TB:: Electr  11 12 13 14 15 16 17 18 19 20 21 22 23 UNIT - III CO3:: Under	Intro Prin Prin EM Typ Toro Cha App Thre Spec Swin Brak Nun Tuto AC erstand ical Te	chnology by U.A.Bakshi eduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor aburne's Test te Test te Test te rical Problem rial EMACHINES: TRANSFORMER I the principle of operation and construction dechnology by M S Naidu, S Kamakshaiah chnology by U.A.Bakshi ciple of operation and construction of single	24-05-2021 To: 05-06-2021	with MS Teams
TB:: Electr  11  12  13  14  15  16  17  18  19  20  21  22  23  UNIT - III  CO3:: Under TB:: Electrical Elect	Intro Prin EM Typ Toro Cha App Thro Spec Swin Brak Nun Tuto AC erstand ical Te Prin phas	chnology by U.A.Bakshi eduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications ee point starter ed control methods of DC motor aburne's Test te Test herical Problem rial EMACHINES: TRANSFORMER I the principle of operation and construction dechnology by M S Naidu, S Kamakshaiah echnology by U.A.Bakshi ciple of operation and construction of single te transformers	24-05-2021 To: 05-06-2021	with MS Teams
TB:: Electr  11  12  13  14  15  16  17  18  19  20  21  22  23  UNIT - III  CO3:: Under TB:: Electrical Elect	Intro Prin EM Typ Toro Cha App Thro Spec Swin Brak Nun Tuto AC erstand ical Te Prin phas	chnology by U.A.Bakshi eduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor aburne's Test te Test te Test te rical Problem rial EMACHINES: TRANSFORMER I the principle of operation and construction dechnology by M S Naidu, S Kamakshaiah chnology by U.A.Bakshi ciple of operation and construction of single	24-05-2021 To: 05-06-2021	with MS Teams  rmers.  Online
TB:: Electr  11  12  13  14  15  16  17  18  19  20  21  22  23  UNIT - III  CO3:: Under TB:: Electrical Elect	Intro Prin EM Typ Toro Cha App Thro Spec Swin Brak Nun Tuto AC erstand ical Te Prin phas	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor aburne's Test te Test te Test te rical Problem rial F MACHINES: TRANSFORMER I the principle of operation and construction descending by W.A.Bakshi ciple of operation and construction of single te transformers F equation	24-05-2021 To: 05-06-2021  letails of transfo	with MS Teams  rmers.  Online Classes with
TB:: Electr  11  12  13  14  15  16  17  18  19  20  21  22  23  UNIT - III  CO3:: Under TB:: Electrical Elect	Intro Prin Prin FM Typ Toro Cha App Thro Spec Swin Brak Nun Tuto AC erstand cical Te Prin phas EMI Loss	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor aburne's Test te Test te Test te rical Problem rial F MACHINES: TRANSFORMER I the principle of operation and construction descending by W.A.Bakshi ciple of operation and construction of single te transformers F equation	24-05-2021 To: 05-06-2021  Betails of transform: 07-06-2021	with MS Teams  rmers.  Online
TB:: Electr  11  12  13  14  15  16  17  18  19  20  21  22  23  UNIT - III  CO3:: Under TB:: Electrical Elect	Intro Prin Prin FM Typ Toro Cha App Thro Spec Swin Brak Nun Tuto AC erstand cical Te Prin phas EMI Loss	chnology by U.A.Bakshi eduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications es point starter ed control methods of DC motor aburne's Test te Test te Test derical Problem rail EMACHINES: TRANSFORMER I the principle of operation and construction deschnology by M S Naidu, S Kamakshaiah chnology by U.A.Bakshi ciple of operation and construction of single e transformers F equation es EX SC tests	24-05-2021 To: 05-06-2021  Betails of transfo  From: 07-06-2021 To:	with MS Teams  rmers.  Online Classes with
TB:: Electr  11  12  13  14  15  16  17  18  19  20  21  22  23  UNIT - III  CO3:: Under TB:: Electrical Elect	Intro Prin Prin Cha App Thre Spec Swin Brak Nun Tuto AC erstand ical Te Prin phas EMI Loss OC a Prob	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications re point starter ed control methods of DC motor aburne's Test re Test rerical Problem rial F MACHINES: TRANSFORMER I the principle of operation and construction of echnology by M S Naidu, S Kamakshaiah chnology by U.A.Bakshi ciple of operation and construction of single e transformers F equation es & SC tests lems	24-05-2021 To: 05-06-2021  Betails of transform: 07-06-2021	with MS Teams  rmers.  Online Classes with
TB:: Electr  11  12  13  14  15  16  17  18  19  20  21  22  23  UNIT - III  CO3:: Under TB:: Electrical Elect	Intro Print Print EM Typ Toro Cha App Thre Spec Swin Brak Nun Tuto AC erstand cal Te Print phas EMI Loss OC o Prob	chnology by U.A.Bakshi oduction ciple of operation of DC generator F equation es of DC machine que equation racteristics of DC motors lications re point starter ed control methods of DC motor aburne's Test re Test rerical Problem rial F MACHINES: TRANSFORMER I the principle of operation and construction of echnology by M S Naidu, S Kamakshaiah chnology by U.A.Bakshi ciple of operation and construction of single e transformers F equation es & SC tests lems	24-05-2021 To: 05-06-2021  Betails of transfo  From: 07-06-2021 To:	with MS Teams  rmers.  Online Classes with

31	Efficiency and regulation		
32	Numerical Problem		
33	Tutorial		
UNIT – III:	AC MACHINES – AC ROTATING MACHINES		
CO4:: Unde	erstand the principle of operation and construction de	etails of alternat	or and 3-phas
induction m			
TB :: Electr	ical Technology by U.A.Bakshi		
34	Principle of operation and construction of alternators		
35	Types of alternators		
36	Regulation of alternator by synchronous method		
37	Principle of operation of synchronous motor	From:	Online
38	Principle of operation of 3-Phase induction motor	28-06-2021	Classes with
39	Slip-torque characteristics	To:	MS Teams
40	Efficiency	10-07-2021	
41	Applications		
42	Numerical Problem		
43	Tutorial		
UNIT – IV	RECTIFIERS & LINEAR ICs		
CO5:: Stud	y the operation of PN junction diode, half wave, full v	vave rectifiers a	nd OP-AMPs
TB:: Elect	ronic Devices and circuits by S Salivahanan		
	r integrated circuits by D.Roy choudhury		
44	PN junction diodes		
45	Half wave, full wave rectifiers	From:	0.1
46	Characteristics of Op-Amps	12-07-2021 To:	Online Classes with
47	Applications of Op-Amp	24-07-2021	MS Teams
48	Tutorial	1 0, 2021	IVIS Teams
UNIT – VI	TRANSISTORS		
CO6:: learn	the operation of PNP and NPN transistors and various	us amplifiers.	
IB :: Electr	onic Devices and circuits by S Salivahanan		
49	PNP and NPN transistor		
50	Transistor as an amplifier	From:	Online
51	Transistor amplifier	26-07-2021	Classes with
52	Frequency response of CE amplifier	To:	MS Teams
53	Concepts of feedback amplifier	07-08-2021	
	1		

S. Mag D. Signature of the Faculty

Tutorial

54

Signature of the HOD

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

# LESSON PLAN: THERMODYNAMICS - 2201254

Section:	Title: THERM	DDYNAMICS	Course co	de:
11.80			Date: 10/5/2	
	No:00 P	repared By: Mr. M HARI KRISHN	A Appro	oved By : HOD
1 0015: D	lack board, Mi	crosoft Teams, google Meet		,
No. of Periods		ТОРІС	Date	Mode of
UNIT-I	Introduction: 1	Basic Concepts	0.00	Delivery
CO1 : Af <b>ГВ:</b> 1. Engine	ter undergoing to the tering Thermody	namics. PK Nag 6th Edn. McGrow H	'11	
rundar	nentals of Therr	nodynamics – Sonntag, Borgnakke, V	an Wylen, 61	th Edn. Wiley
1	volume	ary, Surrounding, Universe, control	10/05/202	21
2	Types of Syster viewpoints.	ms, Macroscopic and Microscopic	11/05/202	21
3	Equilibrium.	tinuum, Thermodynamic	12/05/202	21
4	State, Property, Irreversible	Process - Reversible, Quasi static &	15/05/202	
5	Processes, cycle	c, Causes of Irreversibility	17/05/202	Lecture
()	Energy in State	and in Transition - Types	17/05/202	
7	Work and Heat,	Point and Path function.	18/05/202	
8	Zeroth Law of Temperature	hermodynamics – Concept of	19/05/202 21/05/202	
		ermometry –Reference Points		
10	Const. Volume	gas Thermometer – Scales of	22/05/202	
	Temperature		24/05/2021	l
11 1	Problems on Zei	oth Law of Thermodynamics	25/05/2021	
		oth Law of Thermodynamics	43/03/2021	

# UNIT-II Laws of Thermodynamics

CO2: After undergoing the course the student will learn the Laws of Thermodynamics. TB:

- 1. Engineering Thermodynamics, PK Nag 6th Edn, McGraw Hill.
- 2. Fundamentals of Thermodynamics Sonntag, Borgnakke, Van Wylen, 6th Edn, Wiley.

13	Joule's Experiments – First law of	28/09/2021	
13	Thermodynamics – Corollaries		
14	First law applied to a Process	29/09/2021	
15	First law applied to non-flow process	31/05/2021	
16	Problems on non-flow work	01/06/2021	
17	Problems on non-flow work	02/06/2021	·
18	First law applied to a flow system	04/06/2021	Lecture
19	Energy balance for closed systems-Specific heats-	05/06/2021	interspersed
20	Internal energy, Enthalpy and Specific heats of	07/06/2021	with
20	Solids, liquids and Ideal gases		discussions
21	Steady flow energy equation applied to Nozzle	08/06/2021	
22	Steady flow energy equation applied to heat	09/06/2021	
22	exchangers		
23	Steady flow energy equation applied to Turbine,	11/06/2021	
24	Problems on Steady flow energy equation	12/06/2021	
25	Problems on Steady flow energy equation	14/06/2021	
26	Problems on Steady flow energy equation	15/06/2021	
27	Problems on Steady flow energy equation	16/06/2021	

### UNIT-III Concept of Entropy

CO3: After undergoing the course the student will learn the Concept of Entropy.

### TB:

1. Engineering Thermodynamics, PK Nag 6th Edn, McGraw Hill.

Fundamentals of Thermodynamics - Sonntag, Borgnakke, Van Wylen, 6th Edn, Wiley.

20	Limitations of the First Law – Thermal Reservoir,	18/06/2021	•
28	Heat Engine		
29	Heat pump, Parameters of performance,	19/06/2021	Lecture interspersed with discussions
30	Second Law of Thermodynamics,	21/06/2021	
31	Kelvin-Planck and Clausius Statements	22/06/2021	
32	Equivalence, Corollaries,	23/06/2021	
33	PMM of Second kind, Carnot cycle and its specialties,	25/06/2021	
34	Carnot's theorem, Thermodynamic scale of Temperature.	26/06/2021	
35	Clausius Inequality, Entropy	28/06/2021	
36	Principle of Entropy Increase, Availability and Irreversibility	29/06/2021	

37	Basic definitions – Thermodynamic Potentials,	30/06/2021
38	Gibbs and Helmholtz Functions, Maxwell Relations	02/07/2021
39	Elementary Treatment of the Third Law of	03/07/2021
3,	Thermodynamics	
40	Problems	05/07/2021
41	Problems	06/07/2021
42	Problems	07/07/2021

#### **UNIT-IV** Property evaluation of vapours

**CO4:** After undergoing the course the student will learn the evaluation of vapours and their depiction in tables and charts

#### TB:

1. Engineering Thermodynamics, PK Nag 6th Edn, McGraw Hill.

Fundamentals of Thermodynamics - Sonntag, Borgnakke, Van Wylen, 6th Edn, Wiley.

43	Pure Substances, P-V-T- surfaces	09/07/2021	
44	T-S and h-s diagrams, Mollier Charts	10/07/2021	
45	Phase Transformations – Triple point and critical point,	12/07/2021	Lastrino
46	properties during change of phase, Dryness	13/07/2021	Lecture interspersed with discussions
47	Fraction – Clausius – Clapeyron Equation	14/07/2021	
48	Property tables	16/07/2021	
49	Various Thermodynamic Processes	17/07/2021	discussions
50	energy Transfer – Steam Calorimetry.	19/07/2021	
51	problems	20/07/2021	
52	Problems	23/07/2021	

#### UNIT-V: Evaluation of properties of perfect gas mixtures.

**CO5:** After undergoing the course the student will learn the evaluation of properties of perfect gas mixtures.

#### TB:

1. Engineering Thermodynamics, PK Nag 6th Edn, McGraw Hill.

2. Fundamentals of Thermodynamics – Sonntag, Borgnakke, Van Wylen, 6th Edn, Wiley.

53	Ideal Gas equation of state- Compressibility factor- Van der Waals equation of state	24/07/2021	Lecture
54	Beattie-Bridgeman equation of state- Benedict- Webb-Rubin equation of state	26/07/2021	interspersed with
55	Viral equation of state compressibility charts	27/07/2021	discussions
56	Variable specific heats and Mixtures of perfect	28/07/2021	

	Gases	
57	Dalton's Law of partial pressure, Avogadro's Laws of additive volumes.c	30/07/2021
58	Equivalent Gas constant and Molecular Internal Energy	31/07/2021
59	Enthalpy, Specific Heat and Entropy of Mixture of Perfect Gases and Vapour	02/08/2021
60	Psychrometric Properties – Dry bulb Temperature, Wet Bulb Temperature, Dew point Temperature,	03/08/2021
61	Thermodynamic Wet Bulb Temperature, Specific Humidity, Relative Humidity,	04/08/2021
62	Saturated Air, Vapour pressure, Degree of saturation – Adiabatic Saturation,	06/08/2021
63	Carrier's Equation – Psychrometric chart	07/08/2021
64	Psychrometric chart	09/08/2021
65	Revision	10/08/201
66	Revision	11/08/2021
67	Revision	13/08/2021
68	Revision	14/08/2021

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

# TENTATIVE LESSON PLAN: R201201

Section : ECE-	A Date: 10-05-2021	Page No	: 01 of 02
Revision No : 00	Prepared By : S.KALPANA	Approve	d By: HOD
Tools: Black bo	ard, PPT'S, MS Teams		
No. of Periods	TOPIC	Date	Mode of Delivery
VECTORS CO1: solve syste Seidel (L3)	G SYSTEM OF LINEAR EQUATIONS, EIGEN V m of linear algebraic equations using Gauss elim ng Mathematics", Dr. T.K.V.Iyengar; S.Chand	nination, Gauss Jo	
1	Introduction to matrices	The second secon	
2	Rank of matrix- definition, properties		200
3	Problems on rank by Echelon form		
4	Rank by normal form		•
5	PAQ form problems		
6	Homogeneous system AX=0		Lecture interspersed with discussions
7	Non Homogeneous system AX=B	From:	
8	Problems on rank method		
9	Gauss Elimination method	10-05-2021	
10	Eigen values – definition	To:	
11 .	Properties of Eigen values	29-05-2021	
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		-x:
CO2: Develop the applications (L6		d by engineers for	r practical
	g Mathematics", Dr. T.K.V.Iyengar; S.Chand	publications	
15	Caley Hamilton theorem, verification, problems		

. 16	Finding inverse and power of a matrix by caley Hamilton theorem	MATERIAL STRANGER STRANGER	**************************************
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	31-05-2021	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	12-06-2021	
22	Orthogonal reduction method	12-00-2021	
23	. Congruent operations method	·	
24	Lagrange's method		
25	Problems on finding nature of a QF		

#### UNIT-III: UNIT – III: ITERATIVE METHODS:

CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)

TB: "Engineering Mathematics", Dr. T.K.V. Iyengar; S. Chand publications

26	Introduction	E	
	The second of th	From:	
27	Method – 1: Bisection method		
28	Problems	14-06-2021	
30	Method – 2: Regula falsi method		
31	Problems	To:	
33	Method – 3: Iteration method		
34	Problems	19-06-2021	Lecture
35	Method – 4: Newton Raphson method	_ &	interspersed
36	Problems	From:	with
37	Newton Raphson method simultaneous equations	28.06.2021	discussions
38	Gauss Jacobi Method	28-06-2021	
39	Gauss Seidal Method	То:	
40	problems	07-07-2021	

#### **UNIT – IV: INTERPOLATION**

CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

41	Introduction: Forward and Backward Differences	

42	Newton's Forward interpolation formula	- 1862 (1.0 0 o o o o o o o o o o o o o o o o o o	
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems	00 07 2021	interspersed
47	Problems	08-07-2021	with discussions
48	Gauss Backward interpolation formula –	To:	discussions
	Problems		
49	Problems	24-07-2021	
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		

UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION

CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

53	Trapezoidal rule		20.00
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		T
57	Taylor's series method	From:	Lecture interspersed
58	Problems	26-07-2021.	with discussions
59	Picard's method of successive approximation	To:	
60	Euler's method	07-08-2021	
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

S. Kalpane Signature of Faculty

Signature of HOD

PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

# TENTATIVE LESSON PLAN: R201201

	IATHEMATICS - II		
Section : ECE			: 01 of 02
Revision No : 0		RAO Approved By: I	
	pard, PPT'S, MS Teams		
No. of Periods	TOPIC	Date	Mode of
			Delivery
VECTORS CO1: solve syst Seidel (L3)	NG SYSTEM OF LINEAR EQUATIONS, EIGEN VALUem of linear algebraic equations using Gauss eliminating Mathematics", Dr. T.K.V.Iyengar; S.Chand pub	ion, Gauss Jo	
1 Engineeri	Introduction to matrices	, meations	
	Doub of motion definition and artists		
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form	•	
5	PAQ form problems		
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B	From:	Lecture
8	Problems on rank method		interspersed
9	Gauss Elimination method	10-05-2021	with discussions
10	Eigen values – definition	To:	
11	Properties of Eigen values	29-05-2021	
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
CO2: Develop to applications (Lo	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand pub	engineers for	r practical
15	Caley Hamilton theorem, verification, problems		

16	Finding inverse and power of a matrix by caley  Hamilton theorem		12 - CONTRACTOR A 14 (COLUMN
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	31-05-2021	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	12-06-2021	
22	Orthogonal reduction method	12-00-2021	
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		

#### UNIT-III: UNIT – III: ITERATIVE METHODS:

CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)

TB: "Engineering Mathematics", Dr. T.K.V. Iyengar; S. Chand publications

1b. Engine	ering mathematics, Dr. 1.R. v. Tychgar, S. Chand p	ublications	
26	Introduction	From:	
27	Method – 1: Bisection method		
28	Problems	14-06-2021	
30	Method – 2: Regula falsi method		
31	Problems	To:	
33	Method – 3: Iteration method		
34	Problems	19-06-2021	Lecture
35	Method – 4: Newton Raphson method	&	interspersed
36	Problems	From:	with discussions
37	Newton Raphson method simultaneous equations	28-06-2021	discussions
38	Gauss Jacobi Method	28-00-2021	
39	Gauss Seidal Method	To:	
40	problems	07-07-2021	

#### UNIT - IV: INTERPOLATION

CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

41	Introduction: Forward and Backward Differences		
----	--	--	--

42	Newton's Forward interpolation formula	Line in the second of the seco	CONTRACTOR AND
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems	08-07-2021	interspersed with
47	Problems	00-07-2021	discussions
48	Gauss Backward interpolation formula –	To:	
	Problems		
49	Problems	24-07-2021	
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		

UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION

CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

53	Trapezoidal rule		
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule	From:	Lecture
57	Taylor's series method		interspersed
58	Problems	26-07-2021.	with discussions
59	Picard's method of successive approximation	To:	
60	Euler's method	07-08-2021	
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

Signature of Faculty

Signature of HOD

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

## **TENTATIVE LESSON PLAN: R201207**

Section :E	e: Applied Physics  CE-A Date:	10.05.2021	Page No:	00
Revision No		red By: B.NAGA JYOTHIRMAI	Approved	
Tools:		·		
No. of Periods	TO	DPIC	DATE	Mode of Delivery
UNIT-I	Wave Optics			
	CO1: Analyze the different diffraction with applications resolving power of various	aces between interference and ations. And illustrate the optical instruments.		Lecture
1	INTERFERENCE: Introd			with discussion:
2	Principle of Superposition		From:	
3	Coherent Sources-Types			
4	Interference- Types		10/05/2021	
5	Interference in Thin Films			
6	Colours in Thin Film		To:	
7	Newton's Rings		02/06/2021	
8	Applications of Interference	ce control of the con	03/06/2021	
9	Problems			
10	<b>Diffraction:</b> Introduction			
11	Fresnel and Fraunhoffer Diffraction			
12	Fraunhoffer diffraction at	single slit		
13	Fraunhoffer diffraction at	single slit		Lecture
14	Fraunhoffer diffraction at			intersperse
15	Fraunhoffer diffraction at	N-Slits		with
16	Grating Equation			discussion
17	Dispersive Power of Grati			
18	Resolving Power of Gratin	ng		
19	Problems			
20	Polarization: Introduction	n		
21	Types of Polarization			
22	Polarization by Reflection			
23	Polarization by Duoble Re	erraction		
24	Nicol Prism	va Diatos and Ducklams		
25 UNIT II	Quarter Wave & Half Wa			
UNIT- II		pes of emission of radiation. n engineering applications.		Lecture intersperse
		f optical fibers in medical,		with
		fields. Apply the fiber optic		discussion
	concepts in various fields.			
26	Lasers: Introduction	AND ACCOUNT OF A CONTRACTOR		
27	Characteristics of Laser			
28	Spontaneous and Stimulat	ed emission	our agreement and	a Marketa . A
29. in	Einstein's Coefficients	Residence Co		
30 cm	Population Inversion, Lasi	ng action		ลขับเกล้า
13.10 icuz	Pumping Mechanism-Pun		Charles and the second	na me hodi

32	Ruby Laser		
33	Helium Neon Laser		
34	Applications of Lasers		
35	Fiber Optics: Introduction		
36	Principle of Optical Fiber	INTERNAL CONTROL OF THE PROPERTY OF THE PROPER	rana ne la ligazioni di con la la
37	Acceptance angle and Numerical Aperture		Lecture
38	Classifications optical fibers based on refractive index		interspersed
	profile and modes		with
39	Propagation of electromagnetic wave through optical		discussions
	fibers, applications		
40	Problems		
UNIT -III	Quantum Mechanics, Free Electron Theory and		1
	Band theory		
	CO3: Describe the dual nature of matter. Identify the		
	role of Schrodinger's time independent wave equation		
	in studying particle in one-dimensional infinite		
	potential well. Identify the role of classical and	From:	
	quantum free electron theory in the study of electrical	17-06-2021	
	conductivity.	То	
41	Quantum Mechanics: Introduction	06-07-2021	
42	Dual Nature of Matter		
43	Heisenberg's Uncertainty Principle, Significance and		
	properties of wave function		
44	Schrodinger Time Independent Equation		
45	Schrodinger Time Dependent Equation		
46	Particle in a Box		
47	Problems		Lecture
·48	Free Electron Theory: Introduction		interspersed
49	Classical free electron theory- merits and demerits		with
50	Quantum free electron theory- merits and demerits		discussions
51	Equation for electrical conductivity based on quantum		
	free electron theory		
52	Fermi-Dirac distribution, Fermi energy.		
53	Density of states (3D)		
54	Problems		
55	Band theory of Solids :Introduction		
56	Bloch's Theorem, Kronig - Penney model		
57	E vs K diagram - v vs K diagram		
58	Effective Mass of Electron, Concept of Hole		
59	Energy Bands in Crystalline Solids Classification		
UNIT-IV	Dielectric and Magnetic Materials	From	
	CO4: Explain the concept of dielectric constant and	08-07-2021	
	polarization in dielectric materials. Explain the	То	
	applications of dielectric and magnetic materials.	24-07-2021	
	Apply the concept of magnetism to magnetic devices.		
60	Dielectric Materials: Introduction, Dielectric		
	polarization		
61	Types of polarizations- Electronic polarisation		Lecture
62	Ionic polarisation, Orientation polarizations		intersperse
63	Lorentz internal field		with
64	Clausius-Mossotti equation, Piezoelectricity:	1111 2011	discussions
65	Magnetic Materials: Introduction	difference	
66	Magnetic dipole moment, Magnetization, Magnetic	constant Lands	
The second second second second second	susceptibility and permeability		

67	Origin of permanent magnetic moment		
68	Classification of magnetic materials: Dia, para, Ferro, antiferro and Ferri magnetic materials		
69	Domain concept for Ferromagnetism, Domainwalls	18. (*d)	
	Hysteresis soft and hard magnetic materials		The second section of the second
71	Eddy currents, Engineering applications and Problems		
UNIT - V	Semiconductors and Superconductors		
	CO5: Explain the properties of charge carriers in	From	
,	semiconductors. Identify the type of semiconductor	26-07-2021	
	using Hall effect . Identify applications of	To	
	semiconductors in electronic devices. Explain	07-08-2021	
	Meissner's effect, BCS theory & Josephson effect in		
	superconductors.		
72	Semiconductors: Introduction, Intrinsic		
	semiconductors		Tastana
73	Density of charge carriers ,Electrical conductivity,		Lecture
	Fermi level		interspersed
. 74	Extrinsic semiconductors, density of charge carriers,		with
	Dependence of Fermi energy on carrier concentration		discussions
	and temperature		Contract to any entraction of the second
75	Drift and diffusion currents – Einstein's equation		
76	Hall effect, Hall coefficient, Applications of Hall effect		
77	Superconductors: Introduction – Properties of		
	superconductors		
78	Meissner effect, Type I and Type II superconductors		
70	BCS theory, Josephson effects		
	(AC and DC)		
80	SQUID's – High Tc superconductors, Applications of superconductors		

RN Arthinei Signature of Faculty

nex diametration and recommendation

Signature of HOD

of mulleless PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

## **TENTATIVE LESSON PLAN: R201207**

Section :E		: 10.05.2021	Page No	00
Revision No	o:00 Prep	ared By: B.NAGA JYOTHIRMAI		By: HOD
Tools:				
No. of Periods	7	COPIC	DATE	Mode of Delivery
UNIT-I	Wave Optics			
	CO1: Analyze the different	ences between interference and		
		cations. And illustrate the		Lecture
	resolving power of various			intersperse
1	INTERFERENCE: Intr	oduction		with
2	Principle of Superposition	n	E	discussion
3	Coherent Sources-Types		From:	
4	Interference- Types		10/05/2021	
5	Interference in Thin Film		10/03/2021	
6	Colours in Thin Film		To:	
7	Newton's Rings			
8		200	03/06/2021	
9	Applications of Interferent Problems	ice		
,	Floorenis			
10	Diffraction: Introduction	1.		
	Fresnel and			
	Fraunhoffer Diffraction			
12	Fraunhoffer diffraction at	single slit		
13	Fraunhoffer diffraction at			Lecture
14	Fraunhoffer diffraction at			intersperse
15	Fraunhoffer diffraction at	: N-Slits		with
16	Grating Equation			discussion
17	Dispersive Power of Grat	ing		
18	Resolving Power of Grati	ng		
19	Problems			
20	Polarization: Introduction	n		
21	Types of Polarization			
22	Polarization by Reflection			
23	Polarization by Duoble R	efraction		
24	Nicol Prism			
25	Quarter Wave & Half Wa			
UNIT- II	Lasers and Fiber Optics	(B. 1988) [10] [10] [10] [10] [10] [10] [10] [10]		
		pes of emission of radiation.		Lecture
		n engineering applications.		intersperse
		of optical fibers in medical,		with discussion
	concepts in various fields	fields. Apply the fiber optic		discussion
26	Lasers: Introduction			
27	Characteristics of Laser	N* (1996)		
28	Spontaneous and Stimula	ted emission		3.56
29	Einstein's Coefficients	Planting Sept. Similar Sand Salar		
30	Population Inversion, Las	ing action	4, 1-1 g g 10 014 1	176-47
31	Pumping Mechanism-Pur			1941

30	Population Inversion Laging action		
31	Population Inversion, Lasing action		
32	Pumping Mechanism-Pumping method		Lecture
33	Ruby Laser Helium Neon Laser	To:	interspersed
		10.	with
34	Applications of Lasers	15-06-2021	discussions
35	Fiber Optics: Introduction	15 00 2021	anscassions
36	Principle of Optical Fiber		
37	Acceptance angle and Numerical Aperture		
38	Classifications optical fibers based on refractive index		
20	profile and modes		
39	Propagation of electromagnetic wave through optical		
10	fibers, applications		
40	Problems		
UNIT -III	Quantum Mechanics, Free Electron Theory and		
	Band theory	25	
	CO3: Describe the dual nature of matter. Identify the		
	role of Schrodinger's time independent wave equation		
	in studying particle in one-dimensional infinite		
	potential well. Identify the role of classical and		
	quantum free electron theory in the study of electrical		
41	conductivity.  Quantum Mechanics: Introduction	From: 17-06-2021	
42	Dual Nature of Matter	17-00-2021	
43		-	
43	Heisenberg's Uncertainty Principle, Significance and properties of wave function	То	
44	Schrodinger Time Independent Equation	06-07-2021	
45	Schrödinger Time Independent Equation  Schrödinger Time Dependent Equation	00-07-2021	Lecture
46	Particle in a Box		interspersed
			with
47	Problems		discussions
48	Free Electron Theory: Introduction		
49	Classical free electron theory- merits and demerits		
50	Quantum free electron theory- merits and demerits		
51	Equation for electrical conductivity based on quantum		
	free electron theory		
52	Fermi-Dirac distribution, Fermi energy.		
53	Density of states (3D)		
54	Problems	-	
55	Band theory of Solids :Introduction		
56	Bloch's Theorem, Kronig - Penney model		
57	E vs K diagram - v vs K diagram	-	
58	Effective Mass of Electron, Concept of Hole		
59	Energy Bands in Crystalline Solids Classification		
UNIT-IV	Dielectric and Magnetic Materials		
	CO4: Explain the concept of dielectric constant and		
	polarization in dielectric materials. Explain the		
	applications of dielectric and magnetic materials.	D	
60	Apply the concept of magnetism to magnetic devices.	From	
60	Dielectric Materials: Introduction, Dielectric	08-07-2021	
- 61	polarization Types of polarizations, Electronic polarization		
61	Types of polarizations- Electronic polarisation		
62	Ionic polarisation, Orientation polarizations		Lecture
63	Lorentz internal field		
. 64	Clausius-Mossotti equation, Piezoelectricity.		interspersed

65	Magnetic Materials: Introduction		with
66	Magnetic dipole moment, Magnetization, Magnetic		discussions
	susceptibility and permeability		
67	Origin of permanent magnetic moment		
68	Classification of magnetic materials: Dia, para, Ferro,	То	
	antiferro and Ferri magnetic materials	24-07-2021	
69	Domain concept for Ferromagnetism, Domainwalls		
70	Hysteresis soft and hard magnetic materials		
71	Eddy currents, Engineering applications and Problems		
UNIT – V	Semiconductors and Superconductors		
	CO5: Explain the properties of charge carriers in		
	semiconductors . Identify the type of semiconductor		
	using Hall effect . Identify applications of	From	
	semiconductors in electronic devices. Explain	26-07-2021	
	Meissner's effect, BCS theory & Josephson effect in		
	superconductors.		
72	Semiconductors: Introduction, Intrinsic		
	semiconductors	То	•
73	Density of charge carriers ,Electrical conductivity,	07-08-2021	Lecture
	Fermi level		interspersed
74	Extrinsic semiconductors, density of charge carriers,		with
	Dependence of Fermi energy on carrier concentration		discussions
	and temperature		
75	Drift and diffusion currents – Einstein's equation		
76	Hall effect, Hall coefficient, Applications of Hall effect		
77	Superconductors: Introduction – Properties of		
	superconductors		
78	Meissner effect, Type I and Type II superconductors		
70	BCS theory, Josephson effects		
	(AC and DC)		
80	SQUID's – High Tc superconductors, Applications of		
	superconductors		

Rignature of Faculty

Signature of HOD

Ladmy

PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

of well little

### **TENTATIVE LESSON PLAN(R201208)**

Course T	itle:Data Structures	01208)		
Section :	Date:10-5-2021	Page No: 1 of 2  Approved by :HOD		
Revision No:	Prepared by: CH SIVA RAJESH			
	PTs,MS Teams			
No.of periods	Topics	Date	Mode of Delivery	
CO1 : Un TB:: Fun	Linear Data Structures: Arrays, Stacks and Queues derstanding data structures concepts with arrays, stacks, quedamentals of Data Structures in C, 2nd Edition, E.Horowitz, a Freed, Universities Press Pvt. Ltd	eues S.Sahni and Si		
1	Data Structures -Operations			
2		10-05-2021		
3	Abstract Data Types-Complexity of Algorithms	11-05-2021		
4	Representation of Arrays-Linear Arrays	12-05-2021		
5	-Insertion-Deletion and Traversal of a Linear Array	15-05-2021		
6	Array as an Abstract Data Type-Multi-Dimensional arrays	17-05-2021		
7	-Strings-String Operations	18-05-2021		
	Storing Strings-String as an Abstract Data Type	19-05-2021	Lecture	
8	Stack -Array Representation of Stack-Stack Abstract Data Type	21-05-2021	interspersed with	
9	PrefixInfix and Postfix Arithmetic Expressions	22-05-2021	discussions	
10	Conversion-Evaluation of Postfix Expressions	24-05-2021		
11	Recursion-Towers of Hanoi	25-05-2021		
12	Queues-Definition-Array Representation of Queue	28-05-2021		
13	The Queue Abstract Data Type-Circular Queues	29-05-2021		
14	Dequeues	31-05-2021		
15	Priority Queues	01-06-2021		
B:: Fund	Linked Lists nding linked lists for stacks, queues and for other application amentals of Data Structures in C, 2nd Edition, E.Horowitz, S Freed, Universities Press Pvt. Ltd	ns S.Sahni and Su	CO2	
16	Pointers-Pointer Arrays	02-06-2021		
17	Linked Lists-Node Representation	04-06-2021		
18	n-Single Linked List-Traversing and Searching a Single Linked	05-06-2021		
19	Insertion into and Deletion from a Single Linked List	07-06-2021		
20	Header Linked Lists	08-06-2021	Lecture	
21	Circularly Linked Lists		interspersed with	
	Doubly Linked Lists	09-06-2021	discussions	
The second secon	Linked Stacks and Queues	11-06-2021	discussions	
	Polynomials-Polynomial Representation	12-06-2021		
	Sparse Matrices	14-06-2021 15-06-2021		
	Trees	13-00-2021		
NIT-III nderstand			CO3:	
nderstand B:: Funda	ling traversal methods in the Trees.  mentals of Data Structures in C, 2nd Edition, E. Horowitz, S.	Sahni and Sus		
nderstand B:: Funda Inderson	ling traversal methods in the Trees. Imentals of Data Structures in C, 2nd Edition, E.Horowitz, S. Freed, Universities Press Pvt. Ltd			
nderstand B:: Funda anderson	ling traversal methods in the Trees.  mentals of Data Structures in C, 2nd Edition, E. Horowitz, S.	Sahni and Sus 19-06-2021 28-06-2021		

29	Layout Managers	28-06-2021
30	Buttons, Check Boxes, Radio Buttons	29-06-2221
31	Labels, Text Fields, Text Areas	30-06-2021
32	Combo Boxes, Lists	02-07-2021
33	Scroll Bars, Sliders	03-07-2021
34	Windows, Menus, Dialog Box	05-07- 2021
35	Applet and its life cycle	06-07-2021
36	Creating a swing applet	07-06-2021

#### UNIT-IV I/O programming

CO1: Understanding how to write and read data to and from the files.

TB:: Programming in JAVA, Sachin Malhotra, Saurabh Choudary, Oxford

2=			
37	Text and Binary I/O	09,10-07-21	
38	Binary I/O classes	12,13-07-21	Lecture interspersed with discussions
39	Object I/O	14,16-07-21	
40	Random Access Files	17,19-07-21	
41	Event driven model	20,23-07-21	
42	handling events	24,26-07-21	
No America		24,20-07-21	

### UNIT-V Multithreading in java

CO1: Understanding how to create threads and how to start the threads

TB:: Programming in JAVA, Sachin Malhotra, Saurabh Choudary, Oxford

43	Thread life cycle and methods	27.20.07.21	
44	Runnable interface	27,28-07-21	
		30,31-07-21	Laster
45	Thread synchronization	02-08-1921	Lecture interspersed with discussions
46	Exception handling with try-catch-finally	3 4-08-21	
47	Collections in java	06-08-1921	
48	JavaBeans and Network Programming	07-08-1921	
	-0	07-08-1921	

Signature of the Faculty

INCIDAL

Signature of the H

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108 TENTATIVE LESSON PLAN: R20/2/3

Course Ti	tle: NETWORK ANALYSIS			
Section:				
A	Date:10-5-2021	Page No: 1 of 3		
Revision No:	Prepared by : P.RAVEENDRA	Approved b	y :HOD	
Tools: Pl	PTs (online)			
No.of	Topics	Date	Mode of	
periods	Topics	Date	Delivery	
UNIT-I:Ir	ntroduction to Electrical Circuits			
CO1 : Gai	in the knowledge on basic network elements.			
TB:: Netw	ork Analysis – ME Van Valkenburg, Prentice Hall of In	dia, 3rd Editio	on, 2000	
TB:: Netw	ork Analysis by K.Satya Prasad and S Sivanagaraju, Ce	ngage Learnii	ng. TB::Electric	
Circuit Ar	nalysis by Hayt and Kimmarle, TMH			
1	Network elements classification			
2	Electric charge, current, energy and potential			
3	Electric charge, current, energy and potential			
4	Resistance parameter - series and parallel combination			
5	Inductance parameter -series and parallel combination			
6	Capacitance parameter-series and parallel combination			
7	Energy sources: Ideal, Non-ideal			
8	Independent and dependent sources			
9	Source transformation			
10	Kirchoff's laws			
11	Mesh analysis and Nodal analysis problem solving			
12	Mesh analysis and Nodal analysis problem solving			
	A.C Fundamentals and Network Topology	FROM:	Lecture	
13	Definitions of terms associated with periodic functions	10-5-2021	interspersed	
	Time period, Angular velocity and frequency	TO	with discussions	
	RMS value, Average value, Form factor and peak factor	25-5-2021	through MS	
	RMS value, Average value, Form factor and peak factor	7	Teams	
	problem solving			
18	problem solving			
The second second	Phase angle, Phasor representation			
	Addition and subtraction of phasors	<del>-</del>		
	mathematical representation of sinusoidal quantities	1		
	explanation with relevant theory, problem solving			
	explanation with relevant theory, problem solving			
	Principal of Duality with examples			
	Definitions of branch, node, tree			
The second state of the second	planar, non-planar graph, incidence matrix			
	basic tie set schedule, basic cut set schedule			

29 Definition of 30 R-L circuit, 31 R-L circuit, 32 Evaluating i 33 second order 34 homogeneous 35 problem solor 36 problem solor 37 Response as UNIT-III: Steady State CO3: Analyze the per TB:: Network Analysis TB::Network Analysis TB::Electric Circuit Analysis TB::Deta co 43 Star-Delta co 44 problem solor 45 problem solor 46 Self inductar 47 Coefficient 48 Natural curr 49 Conductivel 50 problem solor UNIT-IV: Resonance CO4: To Understand TB:: Network Analysis Circuit Analysis by Homogeneous 152 Definition of 53 Bandwidth of 54 Condition for the solor and	s – ME Van Valkenburg, Prentice Hall of Ind s by K.Satya Prasad and S Sivanagaraju, Cer ayt and Kimmarle, TMH		
30 R-L circuit, 31 R-L circuit, 32 Evaluating i 33 second orde 34 homogeneous 35 problem sol 36 problem sol 37 Response as  UNIT-III:Steady Stat CO3: Analyze the per TB:: Network Analysi TB::Electric Circuit Analysi TB::Detric Circuit Analysi TB::Detric Circuit Analysi TB::Detric Circuit Analysi Analyze the per Analysi Analysi Analysi Complex imp Analysi Analysi Analysi Circuit Analysis by Home Analysi Circuit Analysis by Home	ifferential equations		_
31 R-L circuit, 32 Evaluating i 33 second orde 34 homogeneous 35 problem solo 36 problem solo 37 Response as  UNIT-III:Steady Stat  CO3: Analyze the per TB:: Network Analysi TB::Electric Circuit Analysi 40 Complex imp 41 problem solv 42 Star-Delta co 43 Star-Delta co 43 Star-Delta co 44 problem solv 45 problem solv 46 Self inducta 47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand TB::Network Analysi Circuit Analysis by Homogeneous 51 Resonance: 52 Definition of 53 Bandwidth of 54 Condition for	f time constants		
32 Evaluating i 33 second orde 34 homogeneous 35 problem soli 36 problem soli 37 Response as  UNIT-III:Steady Stat CO3: Analyze the per TB:: Network Analysi TB::Electric Circuit A 38 Impedance co 39 series R-L, R 40 Complex impedance co 41 problem solv 42 Star-Delta co 43 Star-Delta co 43 Star-Delta co 44 problem solv 45 problem solv 46 Self inducta 47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand TB:: Network Analysis Circuit Analysis by Homogeneous TB::Network Analysis Circuit Analysis by Homogeneous 53 Bandwidth of 54 Condition for	R-C circuit with DC excitation		
33 second orde 34 homogeneous 35 problem soli 36 problem soli 37 Response as UNIT-III:Steady Stat CO3: Analyze the per IB:: Network Analysi IB::Network Analysi IB::Electric Circuit Analysi 38 Impedance con 39 series R-L, R 40 Complex impedance con 41 problem solv 42 Star-Delta con 43 Star-Delta con 44 problem solv 45 problem solv 46 Self inductan 47 Coefficient on 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand IB:: Network Analysis Circuit Analysis by Homogeneous Star-Delta con 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand IB:: Network Analysis Circuit Analysis by Homogeneous Star-Delta con Star-Delta con 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand IB:: Network Analysis Circuit Analysis by Homogeneous Star-Delta con Star-Delta con 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand IB:: Network Analysis Circuit Analysis by Homogeneous Star-Delta con Star-Delta co	R-C circuit with DC excitation	FROM:	Lecture
34 homogeneous 35 problem solidation 36 problem solidation 37 Response as UNIT-III:Steady Stat CO3: Analyze the per IB:: Network Analysi IB::Electric Circuit Analysi Impedance complex impedanc	nitial conditions procedure	26-5-2021	interspersed
35 problem sol 36 problem sol 37 Response as UNIT-III: Steady Stat CO3: Analyze the per IB:: Network Analysi IB:: Network Analysi IB:: Electric Circuit A 38 Impedance co 39 series R-L, R 40 Complex imp 41 problem solv 42 Star-Delta co 43 Star-Delta co 43 Star-Delta co 44 problem solv 45 problem solv 46 Self inducta 47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand IB:: Network Analysis Circuit Analysis by H 51 Resonance: 52 Definition of 53 Bandwidth of 54 Condition for	differential equations	ТО	with discussions
36 problem solo 37 Response as UNIT-III: Steady Stat CO3: Analyze the per IB:: Network Analysis IB::Network Analysis IB::Electric Circuit Analysis IB::Electric Circuit Analysis IB::Definition of Salphanese Sal	is, non- homogenous	10-6-2021	through MS
36 problem solo 37 Response as UNIT-III: Steady Stat CO3: Analyze the per IB:: Network Analysis IB::Network Analysis IB::Electric Circuit Analysis IB::Electric Circuit Analysis IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ving using RLC elements with DC excitation		Teams
UNIT-III: Steady State CO3: Analyze the per TB:: Network Analysi TB::Network Analysi TB::Electric Circuit Analysi Steries R-L, R 40 Complex imp 41 problem solv 42 Star-Delta co 43 Star-Delta co 44 problem solv 45 problem solv 46 Self inducta 47 Coefficient 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand TB:: Network Analysi Circuit Analysis by H 51 Resonance: 52 Definition o 53 Bandwidth o 54 Condition fo	ving using RLC elements with AC excitation		
UNIT-III: Steady State CO3: Analyze the per TB:: Network Analysi TB::Network Analysi TB::Electric Circuit A  38	related to s-plane rotation of roots		
40 Complex important for the control of the control	analysis by Hayt and Kimmarle, TMH		
40 Complex imp 41 problem solv 42 Star-Delta co 43 Star-Delta co 44 problem solv 45 problem solv 46 Self inducta 47 Coefficient 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand TB:: Network Analy TB::Network Analysis Circuit Analysis by H 51 Resonance: 52 Definition o 53 Bandwidth o 54 Condition fo			
41 problem solv 42 Star-Delta co 43 Star-Delta co 44 problem solv 45 problem solv 46 Self inducta 47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand TB:: Network Analysis Circuit Analysis by H 51 Resonance: 52 Definition o 53 Bandwidth o 54 Condition fo	-C, R-LC circuits problem solving.		
42 Star-Delta co 43 Star-Delta co 44 problem solv 45 problem solv 46 Self inducta 47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solv UNIT-IV: Resonance CO4: To Understand TB:: Network Analy TB::Network Analysis Circuit Analysis by H 51 Resonance: 52 Definition of 53 Bandwidth of 54 Condition for	edance and phasor notation for R-L, R-C, R-L-C		Lecture
43 Star-Delta co 44 problem solv 45 problem solv 46 Self inducta 47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solv  UNIT-IV: Resonance CO4: To Understand B:: Network Analysis Circuit Analysis by H 51 Resonance: 52 Definition of 53 Bandwidth of 54 Condition for	ng using mesh and nodal analysis		
44 problem solv 45 problem solv 46 Self inducta 47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solv  UNIT-IV: Resonance CO4: To Understand TB:: Network Analysis Circuit Analysis by H 51 Resonance: 52 Definition of 53 Bandwidth of 54 Condition for		FROM:	
45 problem solv 46 Self inducta 47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solv  UNIT-IV: Resonance CO4: To Understand B:: Network Analysis Circuit Analysis by H 51 Resonance: 52 Definition of 53 Bandwidth of 54 Condition for		11-6-2021	interspersed
46 Self inducta 47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solv  JNIT-IV: Resonance CO4: To Understand TB:: Network Analysis Circuit Analysis by H 51 Resonance: 52 Definition of 53 Bandwidth of 54 Condition for		TO	with discussions
47 Coefficient of 48 Natural curr 49 Conductivel 50 problem solution of 50 problem solution of 51 Resonance: 52 Definition of 53 Bandwidth of 54 Condition for 54 Condition of 55 problem solution of 55 probl		20-7-2021	through MS
48 Natural curr 49 Conductivel 50 problem solv  UNIT-IV: Resonance CO4: To Understand TB:: Network Analysis Circuit Analysis by H  51 Resonance: 52 Definition o 53 Bandwidth o 54 Condition fo	nce, Mutual inductance		Teams
49 Conductivel 50 problem solv  UNIT-IV: Resonance CO4: To Understand B:: Network Analysis Circuit Analysis by H  51 Resonance: 52 Definition o 53 Bandwidth o 54 Condition fo	of coupling, analysis of coupled circuits		
JNIT-IV: Resonance CO4: To Understand TB:: Network Analysis Circuit Analysis by H  51 Resonance: 52 Definition o 53 Bandwidth o 54 Condition fo	ent, Dot rule of coupled circuits		
JNIT-IV: Resonance CO4: To Understand B:: Network Analysis Circuit Analysis by H  51 Resonance: 52 Definition o 53 Bandwidth o 54 Condition fo	y coupled equivalent circuits		
CO4: To Understand CB:: Network Analysis Circuit Analysis by H  51 Resonance: 52 Definition o 53 Bandwidth o 54 Condition fo			
52 Definition o 53 Bandwidth o 54 Condition fo	the Network Theorems & Resonance sis – ME Van Valkenburg, Prentice Hall of In by K.Satya Prasad and S Sivanagaraju, Cen nyt and Kimmarle, TMH	ndia, 3rd Editi ngage Learnin	ion, 2000 g, TB::Electric
53 Bandwidth of Condition for	254-25 Krot (Alex		
54 Condition fo	Q, Series resonance		
	f series resonance, Parallel resonance		Lecture
55   current in an	r maximum impedance	FROM:	interspersed
	ti resonance, anti resonance at all frequencies	21-7-2021	with discussions
The state of the s	f parallel resonance,	ТО	through MS
57 Milliman's, 58 Compensation	Reciprocity, Tellegens	25-7-2021	Teams

9	Superposition, Max Power Transfer
50	Superposition, Max Power Transfer

#### **UNIT-V:Two-port networks**

CO5: gain the knowledge in characteristics of two port network parameters (Z, Y, ABCD, h & g).

TB::Network Analysis – ME Van Valkenburg, Prentice Hall of India, 3rd Edition, 2000 TB:: Network Analysis by K.Satya Prasad and S Sivanagaraju, Cengage Learning, TB::Electric Circuit Analysis by Hayt and Kimmarle, TMH

61	Relationship of two port networks		
62	Z-parameters, Y- parameters		
63	Transmission line parameters, h-parameters		Lecture interspersed with discussions through MS Teams
64	Inverse h- parameters	EDOM	
65	Inverse Transmission line parameters	FROM:	
66	Relationship between parameter sets	26-7-2021	
67	Parallel connection of two port networks	TO 07 8 2021	
68	Cascading of two port networks	07-8-2021	
69	series connection of two port networks		
70	problem solving including dependent sources also		
71	problem solving including dependent sources also		

Signature of the Faculty

Signature of the HOD

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108 TENTATIVE LESSON PLAN: PROPRIE

Section:B	Date:10-5-2021	Page No: 1 of 3	
Revision No:	Prepared by : P.RAVEENDRA	Approved b	y :HOD
	PTs (online)		T
No.of periods	Topics	Date	Mode of Delivery
UNIT-I:Iı	ntroduction to Electrical Circuits		
	in the knowledge on basic network elements.		
ГВ:: Netw	vork Analysis – ME Van Valkenburg, Prentice Hall of Ir	idia, 3rd Editio	on, 2000
TB:: Netw	york Analysis by K.Satya Prasad and S Sivanagaraju, C	engage Learnii	ng. TB::Electric
	nalysis by Hayt and Kimmarle, TMH		
1	Network elements classification		
2	Electric charge, current, energy and potential		
3	Electric charge, current, energy and potential		
4	Resistance parameter - series and parallel combination		
5	Inductance parameter -series and parallel combination		
6	Capacitance parameter-series and parallel combination		
7	Energy sources: Ideal, Non-ideal		
8	Independent and dependent sources		
9	Source transformation		
10	Kirchoff's laws		
11	Mesh analysis and Nodal analysis problem solving		
12	Mesh analysis and Nodal analysis problem solving		
	A.C Fundamentals and Network Topology	FROM:	Lecture
13	Definitions of terms associated with periodic functions	10-5-2021	interspersed
14	Time period, Angular velocity and frequency	TO	with discussion through MS Teams
15	RMS value, Average value, Form factor and peak factor	25-5-2021	
16	RMS value, Average value, Form factor and peak factor		
17	problem solving		
18	problem solving		
19	Phase angle, Phasor representation		
20	Addition and subtraction of phasors		
21	mathematical representation of sinusoidal quantities		
22	explanation with relevant theory, problem solving		
23	explanation with relevant theory, problem solving		
24	Principal of Duality with examples		
25	Definitions of branch, node, tree		
26	planar, non-planar graph, incidence matrix		
27	basic tie set schedule, basic cut set schedule		

CO2 : A	:Transients: nalyze the filter design concepts in real world applications. work Analysis – ME Van Valkenburg, Prentice Hall of Ind		ı, 2000
ΓB::Net	work Analysis by K.Satya Prasad and S Sivanagaraju, Cen		
ASSESSE AS	Analysis by Hayt and Kimmarle, TMH		
28	First order differential equations  Definition of time constants		Lecture interspersed
29		_	
30	R-L circuit, R-C circuit with DC excitation	FROM	
31	R-L circuit, R-C circuit with DC excitation	FROM:	
32	Evaluating initial conditions procedure	26-5-2021	with discussion
33	second order differential equations	TO	through MS
34	homogeneous, non-homogenous	10-6-2021	Teams
35	problem solving using RLC elements with DC excitation	_	
36	problem solving using RLC elements with AC excitation  Response as related to s-plane rotation of roots		
	response us remove to a prime remainder of reets		
ГВ::Ele	ctric Circuit Analysis by Hayt and Kimmarle, TMH	igage Learnin	Š.
ΓB::Ele 38	그리고 그 아내는		s 
	ctric Circuit Analysis by Hayt and Kimmarle, TMH	aguge Dem min	š
38	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving.  Complex impedance and phasor notation for R-L, R-C, R-L-C		ğ
38 39	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving.		š
38 39 40	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving.  Complex impedance and phasor notation for R-L, R-C, R-L-C		Lecture
38 39 40 41	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving.  Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis	FROM:	
38 39 40 41 42	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving.  Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis  Star-Delta conversion	FROM: 11-6-2021	Lecture interspersed
38 39 40 41 42 43	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving.  Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis  Star-Delta conversion Star-Delta conversion problem solving.  problem solving.	FROM: 11-6-2021 TO	Lecture
38 39 40 41 42 43 44	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving. Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving.	FROM: 11-6-2021	Lecture interspersed with discussion
38 39 40 41 42 43 44 45	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving. Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits	FROM: 11-6-2021 TO	Lecture interspersed with discussion through MS
38 39 40 41 42 43 44 45 46	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving. Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance	FROM: 11-6-2021 TO	Lecture interspersed with discussion through MS
38 39 40 41 42 43 44 45 46 47	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving. Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits	FROM: 11-6-2021 TO	Lecture interspersed with discussion through MS
38 39 40 41 42 43 44 45 46 47 48	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving. Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits Natural current, Dot rule of coupled circuits	FROM: 11-6-2021 TO	Lecture interspersed with discussion through MS
38 39 40 41 42 43 44 45 46 47 48 49 50	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving. Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits Natural current, Dot rule of coupled circuits Conductively coupled equivalent circuits problem solving	FROM: 11-6-2021 TO	Lecture interspersed with discussion through MS
38 39 40 41 42 43 44 45 46 47 48 49 50	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving. Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits Natural current, Dot rule of coupled circuits Conductively coupled equivalent circuits problem solving  V: Resonance & Network Theorems:	FROM: 11-6-2021 TO	Lecture interspersed with discussion through MS
38 39 40 41 42 43 44 45 46 47 48 49 50 UNIT-I'	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving.  Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits Natural current, Dot rule of coupled circuits Conductively coupled equivalent circuits problem solving  V: Resonance & Network Theorems: O Understand the Network Theorems & Resonance	FROM: 11-6-2021 TO 20-7-2021	Lecture interspersed with discussion through MS Teams
38 39 40 41 42 43 44 45 46 47 48 49 50 UNIT-I CO4: T	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving. Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits Natural current, Dot rule of coupled circuits Conductively coupled equivalent circuits problem solving V: Resonance & Network Theorems: O Understand the Network Theorems & Resonance etwork Analysis – ME Van Valkenburg, Prentice Hall of In	FROM: 11-6-2021 TO 20-7-2021	Lecture interspersed with discussion through MS Teams
38 39 40 41 42 43 44 45 46 47 48 49 50 UNIT-I CO4: T IB:: N	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving.  Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits Natural current, Dot rule of coupled circuits Conductively coupled equivalent circuits problem solving  V: Resonance & Network Theorems: O Understand the Network Theorems & Resonance	FROM: 11-6-2021 TO 20-7-2021	Lecture interspersed with discussion through MS Teams
38 39 40 41 42 43 44 45 46 47 48 49 50 UNIT-I CO4: T IB:: Net Circuit	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving. Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits Natural current, Dot rule of coupled circuits Conductively coupled equivalent circuits problem solving  V: Resonance & Network Theorems: To Understand the Network Theorems & Resonance Setwork Analysis - ME Van Valkenburg, Prentice Hall of Interwork Analysis by K.Satya Prasad and S Sivanagaraju, Centanalysis by Hayt and Kimmarle, TMH	FROM: 11-6-2021 TO 20-7-2021	Lecture interspersed with discussion through MS Teams
38 39 40 41 42 43 44 45 46 47 48 49 50 UNIT-I CO4: T IB:: Net	Impedance concept, phase angle series R-L, R-C, R-LC circuits problem solving.  Complex impedance and phasor notation for R-L, R-C, R-L-C problem solving using mesh and nodal analysis Star-Delta conversion Star-Delta conversion problem solving. problem solving. Self inductance, Mutual inductance Coefficient of coupling, analysis of coupled circuits Natural current, Dot rule of coupled circuits Conductively coupled equivalent circuits problem solving  V: Resonance & Network Theorems: To Understand the Network Theorems & Resonance etwork Analysis – ME Van Valkenburg, Prentice Hall of Intervork Analysis by K.Satya Prasad and S Sivanagaraju, Centrology.	FROM: 11-6-2021 TO 20-7-2021	Lecture interspersed with discussion through MS Teams

51	Resonance: Introduction		Lecture interspersed with discussions through MS Teams
52	Definition of Q, Series resonance		
53	Bandwidth of series resonance, Parallel resonance		
54	Condition for maximum impedance	FROM:	
55	current in anti resonance, anti resonance at all frequencies	21-7-2021	
56	Bandwidth of parallel resonance,	TO 25-7-2021	
57	Milliman's, Reciprocity, Tellegens		
58	Compensation, Substitution		

59	Superposition, Max Power Transfer	
60	Superposition, Max Power Transfer	

#### **UNIT-V:Two-port networks**

CO5: gain the knowledge in characteristics of two port network parameters (Z, Y, ABCD, h & g).

TB::Network Analysis – ME Van Valkenburg, Prentice Hall of India, 3rd Edition, 2000 TB:: Network Analysis by K.Satya Prasad and S Sivanagaraju, Cengage Learning, TB::Electric Circuit Analysis by Hayt and Kimmarle, TMH

61	Relationship of two port networks		
62	Z-parameters, Y- parameters		Lecture interspersed with discussions through MS Teams
63	Transmission line parameters, h-parameters		
64	Inverse h- parameters	EDOM:	
65	Inverse Transmission line parameters	FROM:	
66	Relationship between parameter sets	26-7-2021	
67	Parallel connection of two port networks	TO 07 8 2021	
68	Cascading of two port networks	07-8-2021	
69	series connection of two port networks		
70	problem solving including dependent sources also		
71	problem solving including dependent sources also		

Provending Signature of the Faculty

Signature of the HOD

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

### TENTATIVE LESSON PLAN: R201214 BASIC ELECTRICAL ENGINEERING

Course Title: R	SIC ELECTRICAL ENGI	NEEDING		
Section : A	Date: 10.05.2021	LEMING	Page No : 1	l to 3
Revision No : 00	Prepared By : B.Indi	aja	Approved By : HOD	
Tools: MS TEA				
No. of Periods	TOPIC		Date	Mode of Delivery
UNIT-I DC M	chines			
CO1: Students	re able to explain the operat	tion of DC generator a	nd analyze the	
characteristics of	f DC generator and the prin	ciple of operation, cha	racteristics of	DC motor.
Methods of star	ing and speed control metho	ods of DC motors.		
	les Of Electrical Engineerin		ohit Mehta	
	D: :1 6 4 CDC			
1	Principle of operation of DC equation	generator, emf		Online Classes with
2	types of DC machines			
3	torque equation of DC motor	, applications		
4	three point starter		From:	
5	losses and efficiency, swint	urne's test	10-05-2021 To:	
6	speed control methods		22-05-2021	MS Teams
7	OCC of DC generator, Brake motor	e test on DC Shunt		
8	Numerical problems			
9	tutorial			
UNIT-II Tran	sformers			
	re able to learn the constru	ctional details, principl	le of operation	and
performance of		, p	Spermon	
	oles Of Electrical Engineerin	g by V.K. Mehata, Ro	ohit Mehta	
	Principle of operation of sing	le phase transformer		
10	constructional features			
11	EMF equation			

12	Losses and efficiency of transformer	From: 24-05-2021	Online Classes with MS Teams
13	regulation of transformer		
14,15	OC & SC tests predetermination of efficiency and regulations		
16	Sumpner's test	To: 05-06-2021	
17,18	Numerical Problems		
19	tutorial		
20,21	Principle of operation and construction of alternators	From: 07-06-2021	
22 23,24	types of alternators  Regulation of alternator by synchronous impedance method		
25	EMF equation of three phase alternator	To: 19-06-2021	
26,27	Numerical Problems		Online Classes with MS Teams
28,29	tutorial		
30,31	Construction of three phase synchronous motor		Wis realis
		E	
32	operating principle	From:	
32	operating principle equivalent circuit of synchronous motor	28-06-2021	
		28-06-2021 To:	
33	equivalent circuit of synchronous motor	28-06-2021	
33 34,35,36 37,38,39 NIT-IV Ind D4 :Student	equivalent circuit of synchronous motor  Numerical Problems  tutorial  uction Machine s are able to explain the operation of Synchronous	28-06-2021 To: 10-07-2021 Machines	
33 34,35,36 37,38,39 NIT-IV Ind D4 :Student	equivalent circuit of synchronous motor  Numerical Problems  tutorial  uction Machine	28-06-2021 To: 10-07-2021 Machines	

slip ring and squirrel cage motors	12-07-2021	
slip-torque characteristics	То:	
efficiency calculation	24-07-2021	
starting methods		Online Classes with
Brake test on 3-Phase Induction Motor		MS Teams
Numerical problems		
tutorial		
	slip-torque characteristics efficiency calculation starting methods  Brake test on 3-Phase Induction Motor Numerical problems	slip-torque characteristics  efficiency calculation  starting methods  Brake test on 3-Phase Induction Motor  Numerical problems

UNIT-V Special Machines

CO5: Students are able to understand the operation of various special machines.

TB:: T1: Principles Of Electrical Engineering by V.K. Mehata, Rohit Mehta

49	Principle of operation and construction		
50	single phase induction motor		
51	shaded pole motors	From:	Online
52	capacitor motors	26-07-2021	Classes with MS Teams
53	AC servomotor	To:	IVIS Teams
54,55,56	Numerical problems	07-08-2021	
57,58	tutorial		

Signature of Faculty

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108 Signature of HOD

### TENTATIVE LESSON PLAN: R201214 BASIC ELECTRICAL ENGINEERING

Section : B	ASIC ELECTRICAL ENGINEERING Date: 10.05.2021	Page No:	1 to 3
Revision No : 00		Approved By: HOD	
Tools: MS TEA			Mode of
No. of Periods	TOPIC	Date	Delivery
UNIT-I DC M	achines		
	are able to explain the operation of DC generator		
	of DC generator and the principle of operation, cl	naracteristics of	DC motor.
	ting and speed control methods of DC motors.		
TB:: T1: Princi	ples Of Electrical Engineering by V.K. Mehata , I	Rohit Mehta	
	Principle of operation of DC generator, emf		
1	equation		
	types of DC machines		
2	types of De machines		Online Classes with MS Teams
3	torque equation of DC motor, applications		
	thus a majort stautau		
4	three point starter	From:	
5	losses and efficiency, swinburne's test	10-05-2021	
-	1 , 1 , 1 , 1	To: 22-05-2021	
6	speed control methods	22-03-2021	
X	OCC of DC generator, Brake test on DC Shunt		
7	motor		
8	Numerical problems		
	tutorial		
9	tutoriai		
UNIT-II Tran	sformers		
CO2: Students	are able to learn the constructional details, princi	nle of operation	and
performance of		pie or operation	ang
	ples Of Electrical Engineering by V.K. Mehata, I	Rohit Mehta	
10	Principle of operation of single phase transformer		
10	constructional features		
11	EMF equation		

12	Losses and efficiency of transformer		
13	regulation of transformer	From: 24-05-2021 To: 05-06-2021	
14,15	OC & SC tests predetermination of efficiency and regulations		Online Classes with MS Teams
16	Sumpner's test		
17,18	Numerical Problems		
19	tutorial		
	ciples Of Electrical Engineering by V.K. Mehata,  Principle of operation and construction of alternators		
22	types of alternators		
23,24	Regulation of alternator by synchronous impedance method		
25	EMF equation of three phase alternator		
26,27	Numerical Problems		Online Classes with MS Teams
28,29	tutorial		
30,31	Construction of three phase synchronous motor	T	Wis Teams
32	operating principle	From: 28-06-2021 To: 10-07-2021	
33	equivalent circuit of synchronous motor		
34,35,36	Numerical Problems		
37,38,39	tutorial		
INIT-IV Ind	uction Machine		
CO4 :Students	s are able to explain the operation of Synchronous ciples Of Electrical Engineering by V.K. Mehata ,		

41	slip ring and squirrel cage motors	12-07-2021	
42	slip-torque characteristics	To:	
43	efficiency calculation	24-07-2021	Online
44	starting methods		Classes with MS Teams
45	Brake test on 3-Phase Induction Motor		Wis Teams
46,47	Numerical problems		
48	tutorial		

**UNIT-V** Special Machines

CO5: Students are able to understand the operation of various special machines.

TB:: T1: Principles Of Electrical Engineering by V.K. Mehata, Rohit Mehta

49	Principle of operation and construction		
50	single phase induction motor		
51	shaded pole motors	From:	Online
52	capacitor motors	26-07-2021	Classes with MS Teams
53	AC servomotor	To:	Wis realis
54,55,56	Numerical problems	07-08-2021	99
57,58	tutorial		

Signature of Faculty

PRINCIPAL

SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

Signature of HOD

### TENTATIVE LESSON PLAN: R201201

Section : CSM	Date: 10-05-2021	Page No	Page No: 01 of 02 Approved By: HOD			
Revision No: 0	O Prepared By: S.SUMAN	Approve				
Tools: Black board, PPT'S, MS Teams						
No. of Periods	TOPIC	Date	Mode of Delivery			
VECTORS CO1: solve syste Seidel (L3)	G SYSTEM OF LINEAR EQUATIONS, EIGEN em of linear algebraic equations using Gauss eli ng Mathematics", Dr. T.K.V.Iyengar; S.Chan	mination, Gauss Jo				
1	Introduction to matrices	• •				
2	Rank of matrix- definition, properties		Lecture interspersed with discussions			
3	Problems on rank by Echelon form					
4	Rank by normal form					
5	PAQ form problems					
6	Homogeneous system AX=0					
7	Non Homogeneous system AX=B	From:				
8	Problems on rank method					
9	Gauss Elimination method	10-05-2021				
10	Eigen values – definition	To:				
11	Properties of Eigen values	29-05-2021				
12	Properties of Eigen values	,				
13	Problems on finding eigen values, vectors					
14	Problems on finding eigen values, vectors					
CO2: Develop tapplications (Lo		led by engineers fo	r practical			
	ng Mathematics", Dr. T.K.V.Iyengar; S.Chan Caley Hamilton theorem, verification, problems	u publications	T			
15	Carcy Hammon theorem, verification, problems					

16	Finding inverse and power of a matrix by caley Hamilton theorem	The Manager of the Control of the Co	
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	31-05-2021	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	12.06.2021	
22	Orthogonal reduction method	12-06-2021	
23 .	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		

#### **UNIT-III: UNIT – III: ITERATIVE METHODS:**

CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)

TB: "Engineering Mathematics", Dr. T.K.V. Iyengar; S. Chand publications

26	Later destina		
26	Introduction	From:	
27	Method – 1: Bisection method		
28	Problems	14-06-2021	
30	Method – 2: Regula falsi method		
31	Problems	To:	
33	Method – 3: Iteration method		100
34	Problems	19-06-2021	Lecture
35	Method – 4: Newton Raphson method	_&	interspersed
36	Problems	From:	with
37	Newton Raphson method simultaneous equations	20.06.2021	discussions
38	Gauss Jacobi Method	28-06-2021	
39	Gauss Seidal Method	То:	
40	problems	07-07-2021	

#### **UNIT - IV: INTERPOLATION**

CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

41	Introduction: Forward and Backward Differences	

42	Newton's Forward interpolation formula	e de la companya de l	etingen die der eine Maker der allegen bie
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems	00.07.0001	interspersed
47	Problems	08-07-2021	with discussions
48	Gauss Backward interpolation formula – Problems	То:	aiscussions
49	Problems	24-07-2021	
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		

# UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION

CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

53	Trapezoidal rule		
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		
57	Taylor's series method	From:	Lecture interspersed
58	Problems	26-07-2021.	with discussions
59	Picard's method of successive approximation	To:	discussions
60	Euler's method	07-08-2021	
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

Signature of Faculty

Signature of HOD

### **TENTATIVE LESSON PLAN: R201207**

Section :C			: 00
Revision N	o:00 Prepared By: M.VIDYA ELIZABET		d By: HOD
Tools:			
No. of Periods	TOPIC	DATE	Mode of Delivery
UNIT-I	Wave Optics		
	<b>CO1:</b> Analyze the differences between interference and		
	diffraction with applications. And illustrate the		Lecture
	resolving power of various optical instruments.		intersperse
1	INTERFERENCE: Introduction		with
2	Principle of Superposition	_	discussion
3	Coherent Sources-Types	From:	
4	Interference- Types	10/05/2021	
5	Interference in Thin Films	10/05/2021	
6	Colours in Thin Film	To:	
7	Newton's Rings	10:	7-9
		03/06/2021	
8	Applications of Interference	03/00/2021	
9	Problems		
10	Dicc di Talai		
10	Diffraction: Introduction		
11	Fresnel and		
	Fraunhoffer Diffraction		
12	Fraunhoffer diffraction at single slit		
13	Fraunhoffer diffraction at single slit		Lecture
14	Fraunhoffer diffraction at Double Slit		intersperse
15	Fraunhoffer diffraction at N-Slits		with
16	Grating Equation		discussions
17	Dispersive Power of Grating		
18	Resolving Power of Grating		
19	Problems		
20	Polarization: Introduction		
21	Types of Polarization		
22	Polarization by Reflection, Refraction		
23	Polarization by Duoble Refraction		
24	Nicol Prism		
25	Quarter Wave & Half Wave Plates and Problems		
UNIT- II	Lasers and Fiber Optics		Lecture
	CO2: Explain various types of emission of radiation.		interspersed
	Identify the role of laser in engineering applications.		with
	Identify the applications of optical fibers in medical,		discussions
	communication and other fields. Apply the fiber optic		
26	concepts in various fields.  Lasers: Introduction		
27	Characteristics of Laser		
28	Chartenania and Ct. 1 t 1		
29	Spontaneous and Stimulated emission Einstein's Coefficients	arici Achil Le Leb	· 100 - 100
30	The state of the s	nugents.	the and the state of the state
31	Population Inversion, Lasing action Pumping Mechanism-Pumping method	Cistoff, Lastri	
31	T amburd meetigment-rumping method	Sold Missing	THE PROPERTY.

32	Ruby Laser		
33	Helium Neon Laser		
34	Applications of Lasers		
35	Fiber Optics: Introduction		
- 36	Principle of Optical Fiber	Cartana and Carta Maria Article	erior de la companya
37	Acceptance angle and Numerical Aperture		Lecture
38	Classifications optical fibers based on refractive index		interspersed
	profile and modes		with
39	Propagation of electromagnetic wave through optical		discussions
	fibers, applications		
40	Problems		
UNIT -III	Quantum Mechanics, Free Electron Theory and		
	Band theory		
	CO3: Describe the dual nature of matter. Identify the		
	role of Schrodinger's time independent wave equation		
	in studying particle in one-dimensional infinite		
	potential well. Identify the role of classical and	From:	
	quantum free electron theory in the study of electrical	17-06-2021	
	conductivity.	То	
41	Quantum Mechanics: Introduction	06-07-2021	
42	Dual Nature of Matter		
43	Heisenberg's Uncertainty Principle, Significance and		
	properties of wave function		
44	Schrodinger Time Independent Equation		
45	Schrodinger Time Dependent Equation	1	
46	Particle in a Box		
47	Problems		Lecture
48	Free Electron Theory: Introduction	1	intersperse
49	Classical free electron theory- merits and demerits		with
50	Quantum free electron theory- merits and demerits		discussions
51	Equation for electrical conductivity based on quantum		
31	free electron theory		
52	Fermi-Dirac distribution, Fermi energy.		
53	Density of states (3D)		r en en en
54	Problems		
55	Band theory of Solids :Introduction		
56	Bloch's Theorem, Kronig - Penney model	1	
57	E vs K diagram - v vs K diagram		
58	Effective Mass of Electron, Concept of Hole		
59	Energy Bands in Crystalline Solids Classification		- 76
UNIT-IV	Dielectric and Magnetic Materials	From	Marine for the
O1111-11	CO4: Explain the concept of dielectric constant and	08-07-2021	
	polarization in dielectric materials. Explain the	To	
	applications of dielectric and magnetic materials.	24-07-2021	
	Apply the concept of magnetism to magnetic devices.		
60	Dielectric Materials: Introduction, Dielectric		
	polarization		
61	Types of polarizations- Electronic polarisation		Lecture
62	Ionic polarisation, Orientation polarizations		intersperse
63	Lorentz internal field		with
64	Clausius-Mossotti equation, Piezoelectricity.	National Control	discussion
65	Magnetic Materials: Introduction	The Secretary	
66	Magnetic dipole moment, Magnetization, Magnetic		o arri ta
00	susceptibility and permeability	100	a de la companya de l

67	Origin of permanent magnetic moment		
68	Classification of magnetic materials: Dia, para, Ferro, antiferro and Ferri magnetic materials		
69	Domain concept for Ferromagnetism, Domainwalls		
70	Hysteresis soft and hard magnetic materials	Z MOZI LIK. A LIK A DOMEN A LANG	and the state of t
71	Eddy currents, Engineering applications and Problems	per Paul a proposed to a second second	
UNIT – V	Semiconductors and Superconductors		
	CO5: Explain the properties of charge carriers in	From	
	semiconductors . Identify the type of semiconductor	26-07-2021	
	using Hall effect . Identify applications of	То	
	semiconductors in electronic devices. Explain	07-08-2021	
	Meissner's effect, BCS theory & Josephson effect in		
	superconductors.		
72	Semiconductors: Introduction, Intrinsic		
	semiconductors		
73	Density of charge carriers ,Electrical conductivity,		Lecture
	Fermi level		interspersed
74	Extrinsic semiconductors, density of charge carriers,		with
	Dependence of Fermi energy on carrier concentration		discussions
A record to National Conference of the Conferenc	and temperature	100 mg/s	
75	Drift and diffusion currents – Einstein's equation		
76	Hall effect, Hall coefficient, Applications of Hall effect		
77	Superconductors: Introduction – Properties of		
	superconductors		
78	Meissner effect, Type I and Type II superconductors		
70	BCS theory, Josephson effects		
	(AC and DC)		
80	SQUID's - High Tc superconductors, Applications of		
	superconductors		

H.V. Elizabelt
Signature of Faculty

Signature of HOD

SRK Institute of Technology



Enikepadu, Vijayawada, 521108

Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution)

Department of Science and Humanities

#### TENTATIVE LESSON PLAN R201218/R20 DATA STRUCTURES

Course Title:	DATA STRUCTURES (R201218)	
Section : CSM	Date: 09/05/2021	Page No: 01 of 03
Revision No: 00	Prepared By : Dr. B. Srikanth	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
CO1: U	ntroduction to Data Structures, Searching & Sorting Technic nderstand the basic concepts of data structures and Sum g & sorting techniques ta Structures Using C. 2nd Edition, Reema Thareja, Oxford	marize the co	oncept abou
1	Data Structures - Definition		
2	Classification of Data Structures		
3	Operations on Data Structures, Abstract Data Type (ADT)		
4	Preliminaries of algorithms, Time and Space complexity		
5	Searching - Linear search	From:	Lecture
6	Binary search	11/05/2021	Interspersed With MS Teams
7	Fibonacci search		
8	Sorting- Insertion sort	To:27/05/20	
9	Selection sort	21	
10	Exchange -Bubble sort		
11	Exchange -Quick sort		
12	Distribution (radix sort)		
13	Merging (Merge sort)		
14	Tutorial		
UNIT-II	: Linked List Concepts		
CO2: In	plement different Linked List Algorithms		
TB:" Da	ta Structures Using C. 2nd Edition, Reema Thareja, Oxford		
10	Linked List: Introduction, Single linked list		
11	Representation of Linked list in memory		
12	Operations on Single Linked list-Insertion		
13	Deletion		
14	Search and Traversal		
15	Reversing Single Linked list	F20/05	Lastura
16	Applications on Single Linked list - Polynomial Expression	From:29/05	Lecture



# Enikepadu, Vijayawada, 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Department of Science and Humanities

46.70	Representation	/2021	interspersed
17	Addition and Multiplication	To:	with
18	Sparse Matrix Representation using Linked List	19/06/2021	MS Teams
19	Advantages and Disadvantages of Single Linked list		
20	Double Linked list-Insertion		
21	Deletion		
22	Circular Linked list-Insertion		
23	Deletion.		
24	Tutorial		
No. of	TOPIC	Date	Mode of
Periods			Delivery
TB:" D:	escribe Stack and Queue operations ata Structures Using C. 2nd Edition, Reema Thareja, Oxford ' Queues: Introduction to Queues	6	
	Representation of Queues-using Arrays Representation of		
	Queues-using Linked list		
27	Implementation of Queues-using Arrays		
28	Implementation of Queues-using Linked list		Lecture interspersed with MS Teams
29	Application of Queues-Circular Queues, Dequeues	From:21/06	
30	Priority Queues, Multiple Queues	/2021	
31	Stacks: Introduction to Stacks		
32	Array Representation of Stacks	To:	
33	Operations on Stacks	12/07/2021	
34	Linked list Representation of Stacks		
35	Operations on Linked Stack		
36	Applications-Reversing list		
37	Factorial Calculation,		
38	Infix to Postfix Conversion		
39	Evaluating Postfix Expressions		
40	Tutorial	1	
UNIT-I	V: Trees Concepts		
	emonstrate different trees concepts		
	ata Structures Using C. 2nd Edition, Reema Thareja, Oxford	u	
No. of	TOPIC	Date	Mode of
Periods			Delivery
41	Trees: Basic Terminology in Trees		
42			
43	Representation of Binary Trees using Arrays and Linked lists	From:	
44	Binary Search Trees- Basic Concepts	13/07/2021	



#### Enikepadu, Vijayawada, 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Department of Science and Humanities

45	BST Operations: Insertion, Deletion, Tree Traversals	To:	Lecture
46	Applications-Expression Trees	26/07/2021	interspersed
47	Heap Sort		with
48	Balanced Binary Trees AVL Trees		MS Teams
49	Insertion, Deletion and Rotations		
50	Tutorial		
UNIT-V	V: Graphs Concepts		
CO5: k	nowledge of Graph concepts		
	ata Structures Using C. 2nd Edition, Reema Thareja, Oxfo	ord "	
51	Graphs: Basic Concepts		
52	Representations of Graphs		
53	Adjacency Matrix and using Linked list		
54	Graph Traversals (BFT & DFT)		Lecture interspersed with
55	Applications- Minimum Spanning Tree Using Prims Algorithm		
56	Kruskals Algorithm		MS Teams
59	Dijkstra's shortest path,	From:	IVIS TEATIIS
60	Transitive closure	27/07/2021	
61	Warshall's Algorithm	To:10/08/2	
	Walshall S Algorium	021	1

Brankant 5
Signature of Faculty

Signature of HOD

# TENTATIVE LESSON PLAN: R20ES120122 | DIGITAL LOGIC DESIGN

Section : CSE - AI&ML Date : 17		Date: 17/05/2021	Page No :	1 to 4
Revision No : 00		Prepared By : T.Vishnu Priya	Approved By : HOD	
Tools: MS Tean		A		•
S.NO.		TOPIC	Date	Mode of Delivery
CO1: An abilit	y to define	d Binary Numbers different number systems. Binary and operations with this representation.	addition and	subtraction, 2'
		cris Mano, Michael D Ciletti, PEA.		
		stems and Binary Numbers		
1		tems, Binary Numbers		
2	Octal and I	lexadecimal Numbers.		
3	Compleme	nts of Numbers.		
4		ary Numbers.	From	T
5		addition and subtraction.	17/05/2021	Lecture
		, BCD code, BCD addition &	To	interspersed
6	subtraction.	, Deb code, Deb dadition of	02/06/2021	with discussions
7	EXCESS 3	code, addition & subtraction.		discussions
8	Alphanun	neric codes, 242 1, etc.		
8		complement.		
9	Tutorial			
UNIT-II Con	ncept of Bo	olean algebra		
		nd the different switching algebra theor	rems and apply	y them for logi
functions.		0 0		
IUIIVIIOIIO.				
	y to define	the Karnaugh map for a few variable	s and perform	an algorithmi
CO3: An ability		the Karnaugh map for a few variable	s and perform	an algorithmi
CO3: An ability reduction of logi	c functions.		s and perform	an algorithmi
CO3: An ability reduction of logi	c functions. esign, 5/e, M	the Karnaugh map for a few variable orris Mano, Michael D Ciletti, PEA.	s and perform	an algorithmi
CO3: An ability reduction of logi TB1: Digital De	c functions. sign, 5/e, M	orris Mano, Michael D Ciletti, PEA.	s and perform	an algorithmi
CO3: An ability reduction of loging TB1: Digital De	c functions. sign, 5/e, M Concept of Basic The	orris Mano, Michael D Ciletti, PEA. of Boolean algebra corems and Properties of	s and perform	an algorithmi
CO3: An ability reduction of loging TB1: Digital De	c functions. sign, 5/e, M	orris Mano, Michael D Ciletti, PEA. of Boolean algebra corems and Properties of	es and perform	an algorithmi
CO3: An ability eduction of logic TB1: Digital De	c functions. sign, 5/e, M Concept of Basic The	orris Mano, Michael D Ciletti, PEA.  of Boolean algebra corems and Properties of gebra	s and perform	Lecture
CO3: An ability reduction of loging IB1: Digital De 10	c functions. sign, 5/e, M Concept of Basic The Boolean al Boolean Fu	orris Mano, Michael D Ciletti, PEA.  of Boolean algebra  corems and Properties of gebra  inctions	s and perform	Lecture interspersed
CO3: An ability eduction of loging to the control of the control o	c functions. sign, 5/e, M Concept of Basic The Boolean al Boolean Fu	orris Mano, Michael D Ciletti, PEA.  of Boolean algebra corems and Properties of gebra	s and perform	Lecture
CO3: An ability reduction of loging TB1: Digital De 10	c functions. sign, 5/e, M Concept of Basic The Boolean al Boolean Fu Canonical Minterms	forris Mano, Michael D Ciletti, PEA.  of Boolean algebra  corems and Properties of gebra  inctions  and Standard Forms and Maxterms	From	Lecture interspersed with
CO3: An ability reduction of loging TB1: Digital De 10	Basic The Boolean al Boolean Fu	forris Mano, Michael D Ciletti, PEA.  of Boolean algebra corems and Properties of gebra  inctions and Standard Forms and Maxterms  Minimization	From 04/06/2021	Lecture interspersed with
CO3: An ability reduction of loging IB1: Digital December 10	Basic The Boolean Functions.  Concept of Basic The Boolean al Boolean Function Canonical Minterms and Gate level Map Meth	Acrris Mano, Michael D Ciletti, PEA.  of Boolean algebra corems and Properties of gebra  inctions and Standard Forms and Maxterms  Minimization od, Three-Variable K-Map	From 04/06/2021 To	Lecture interspersed with
CO3: An ability reduction of loging TB1: Digital December 10	Boolean Fu Canonical Minterms Gate level Map Meth Four Var Simplifica	forris Mano, Michael D Ciletti, PEA.  of Boolean algebra corems and Properties of gebra  inctions  and Standard Forms and Maxterms  Minimization od, Three-Variable K-Map iable K-Maps. Products of Sum tion, Sum of Products Simplification	From 04/06/2021	Lecture interspersed with
CO3: An ability reduction of loging TB1: Digital December 10	Boolean Fu Canonical Minterms Gate level Map Meth Four Var Simplifica Don't - Ca	derris Mano, Michael D Ciletti, PEA.  of Boolean algebra corems and Properties of gebra  inctions  and Standard Forms and Maxterms  Minimization od, Three-Variable K-Map iable K-Maps. Products of Sum tion, Sum of Products Simplification are Conditions	From 04/06/2021 To	Lecture interspersed with
CO3: An ability reduction of loging TB1: Digital December 10	c functions. sign, 5/e, M Concept of Basic The Boolean al Boolean Fu Canonical Minterms Gate level Map Meth Four Var Simplifica Don't - Canonical OR Functi	forris Mano, Michael D Ciletti, PEA.  of Boolean algebra  corems and Properties of gebra  inctions  and Standard Forms and Maxterms  Minimization od, Three-Variable K-Map iable K-Maps. Products of Sum tion, Sum of Products Simplification are Conditions and NOR Implementation, Exclusive on.	From 04/06/2021 To	Lecture interspersed with discussions
CO3: An ability reduction of logical TB1: Digital December 10	c functions. sign, 5/e, M Concept of Basic The Boolean al Boolean Fu Canonical Minterms Gate level Map Meth Four Var Simplifica Don't - Canonical OR Functi	forris Mano, Michael D Ciletti, PEA.  of Boolean algebra corems and Properties of gebra  inctions and Standard Forms and Maxterms  Minimization od, Three-Variable K-Map iable K-Maps. Products of Sum tion, Sum of Products Simplification are Conditions and NOR Implementation, Exclusive	From 04/06/2021 To	Lecture interspersed with discussions  Lecture interspersed

#### UNIT-III Combinational Logic

CO4: Students will be able to design various logic gates starting from simple ordinary gates to complex programmable logic devices & arrays.

TB1: Digital Design, 5/e, Morris Mano, Michael D Ciletti, PEA.

21	Combinational Logic Introduction, Analysis		Lecture interspersed with discussions
22	Binary Adder,		
23	Binary Subtractor, Binary Multiplier		
24	Decoders, Encoders	F	
25	Priority Encoder, Code Converters	From 21/06/2021	
26	Multiplexers, Demultiplexer.	To	
27	Magnitude Comparator		
28	HDL Models of Combinational Circuits.	14/07/2021	
29	Realization of Switching Functions Using PROM, PAL and PLA.		
30	Tutorial		

#### UNIT-IV Synchronous Sequential Logic

CO5: Students will be able to design various sequential circuits starting from flip-flop to registers and counters.

TB1: Digital Design, 5/e, Morris Mano, Michael D Ciletti, PEA.

31	Synchronous Sequential Logic Introduction to Sequential Circuits.		
32	Storage Elements: Latches, Flip-Flops.	From 16/07/2021	Lecture interspersed
33	Flip-Flops, RS- Latch Using NANO and NOR Gates, Truth Tables	To 24/07/2021	with discussions
34	RS, JK, T and D Flip Flops, Truth and Excitation Tables		
35	Conversion of Flip Flops		
36	Tutorial		

#### **UNIT-V** Registers and Counters

CO5: Students will be able to design various sequential circuits starting from flip-flop to registers and counters.

TB1: Digital Design, 5/e, Morris Mano, Michael D Ciletti, PEA

37	Registers and Counters Registers, Shift Registers,	From 26/07/2021 To 31/07/2021	Lecture interspersed with discussions
38	Synchronous Counters		
39	Ripple Counters, Ring Counter, Johnson Counter		
40	Tutorial		

TB1: Digital Design, 5/e, Morris Mano, Michael D Ciletti, PEA

TB2: Fundamentals of Logic Design, 5/e, Roth, Cengage.

TB3: Digital Logic and Computer Design, M.Morris Mano, PEA.

Signature of Faculty

Signature of HOD

### TENTATIVE LESSON PLAN: R201225 PYTHON PROGRAMMING

12/	age No : 01 o pproved By		
Tools: Black board, PPTs, Moodle  No. of Periods  UNIT-I Data types, Decision Structures, Repetition Structures CO1: To learn about the program development cycle, Data types, repetition structures in python programming.  IB1: Fundamentals of Python First Programs, Kenneth. A. Lambert, Ceng Introduction to Python, Program Development Cycle, Input, Processing, and Output,  Displaying Output with the Print Function, Comments, Variables, Reading Input from the Keyboard, Performing Calculations,	pproved By	. 14()11)	
No. of Periods  UNIT-I Data types, Decision Structures, Repetition Structures CO1: To learn about the program development cycle, Data types, repetition structures in python programming. TB1: Fundamentals of Python First Programs, Kenneth. A. Lambert, Ceng  Introduction to Python, Program Development Cycle, Input, Processing, and Output,  Displaying Output with the Print Function, Comments, Variables, Reading Input from the Keyboard, Performing Calculations,		НОВ	
Periods UNIT-I Data types, Decision Structures, Repetition Structures CO1: To learn about the program development cycle, Data types, repetition structures in python programming. TB1: Fundamentals of Python First Programs, Kenneth. A. Lambert, Ceng Introduction to Python, Program Development Cycle, Input, Processing, and Output,  Displaying Output with the Print Function, Comments, Variables, Reading Input from the Keyboard, Performing Calculations,			
CO1: To learn about the program development cycle, Data types, repetition structures in python programming.  TB1: Fundamentals of Python First Programs, Kenneth. A. Lambert, Ceng  Introduction to Python, Program Development Cycle, Input, Processing, and Output,  Displaying Output with the Print Function, Comments, Variables, Reading Input from the Keyboard, Performing Calculations,	Date	Mode of Delivery	
TB1: Fundamentals of Python First Programs, Kenneth. A. Lambert, Ceng Introduction to Python, Program Development Cycle, Input, Processing, and Output, Displaying Output with the Print Function, Comments, Variables, Reading Input from the Keyboard, Performing Calculations,	<b>.</b>		
IB1: Fundamentals of Python First Programs, Kenneth. A. Lambert, Ceng Introduction to Python, Program Development Cycle, Input, Processing, and Output,  Displaying Output with the Print Function, Comments, Variables, Reading Input from the Keyboard, Performing Calculations,	Decision sti	ructures an	
Introduction to Python, Program Development Cycle, Input, Processing, and Output,  Displaying Output with the Print Function, Comments, Variables, Reading Input from the Keyboard, Performing Calculations,	1906		
Processing, and Output,  Displaying Output with the Print Function, Comments, Variables,  Reading Input from the Keyboard, Performing Calculations,	sage.		
Variables,  Reading Input from the Keyboard, Performing Calculations,			
4 Operators. Type conversions, Expressions, More about Data		Online	
Output.	From:		
Comment,	0/05/2021 Co:		
C N C TO C	0/05/2021		
7 Decision Structures and Boolean Logic: if, if-else, if-elif-else Statements, Nested Decision Structures,			
8 Comparing Strings, Logical Operators, Boolean Variables.			
9 Repetition Structures: Introduction, while loop, for loop, Calculating a Running Total,			
10 Input Validation Loops, Nested Loops.			
11 Tutorial			
UNIT-II Selection, Iterations, String Methods CO2: To gain knowledge on formatted output, String Methods and File TB1: Fundamentals of Python First Programs, Kenneth. A. Lambert, C		python.	
12 Control Statement: Definite iteration for Loop			
13 Formatting Text for output,			
14 Selection if and if else			

	Statement Conditional Iteration The While Loop		
15	Strings and Text Files: Accessing Character and Substring in Strings,	From:	
16	Data Encryption	31/05/2021	Online
17	Strings and Number Systems,		
18	String Methods	To: 19/6/2021	
19	Text Files		
20	Tutorial		
No. of Periods	TOPIC	Date	Mode of Delivery
usage.	Lists, Dictionaries and Functions. learn about Lists, Dictionaries, Defining Functions and Module a		out their
21	List and Dictionaries: Lists.	Lagage.	
22	Defining Simple Functions,		
23	Dictionaries	-	
24	Design with Function: Functions as Abstraction Mechanisms.		
25	Problem Solving with Top Down Design.		0.1
26	Design with Recursive Functions	From: 21/06/2021	Online
27	Case Study Gathering Information from a File System,	21/00/2021	
28	Managing a Program's Namespace,		
29	Higher Order Function.	To: 13/07/2021	
30	Modules: Modules, Standard Modules, Packages.		
31	Tutorial		
	File Operations assimilate about File operations, Object Oriented Programmin ndamentals of Python First Programs, Kenneth. A. Lambert, C		
No. of	TOPIC	Date	Mode of
Periods			Delivery
32	UNIT IV File Operations: Reading config files in python, Writing log		
33	files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and		

34	Manipulating file pointer using seek, Programming using file operations		
35	Object Oriented Programming: Concept of class, object and	From:	
	instances, Constructor, class attributes and destructors,	14/07/2021	
36	Real time use of class in live projects, Inheritance,	14/01/2021	
37	overlapping and overloading operators, Adding and retrieving	To:	0 1:
	dynamic attributes of classes,	30/07/2021	Online
38	Programming using Oops support	30/07/2021	
39	Design with Classes: Objects and Classes, Data modelling		
	Examples, Case Study An ATM,		
40	Structuring Classes with Inheritance and Polymorphism		
41	Tutorial		
UNIT-V			
	o assimilate about Errors and Exceptions, Exception Handling a		ser Interface.
	indamentals of Python First Programs, Kenneth. A. Lambert, C	engage.	
42	Errors and Exceptions: Syntax Errors, Exceptions,		
43	Handling Exceptions, Raising Exceptions, User-defined		
	Exceptions, Defining Clean-up Actions, Redefined Clean-up		
	Actions.	From:	
44	Graphical User Interfaces: The Behavior of Terminal Based	31/07/2021	Online
	Programs and GUI -Based, Programs,		Online
45	Coding Simple GUI-Based Programs,	To:	
46	Other Useful GUI Resources. Programming: Introduction to	14/08/2021	
	Programming Concepts with Scratch.		
47	Tutorial		

Signature of Faculty

### TENTATIVE LESSON PLAN: R201201

Section : CSD	Date: 10-05-2021	Page No	:01 of 02
Revision No: 0	Prepared By : S.KALPANA		ed By : HOD
Tools: Black bo	ard, PPT'S, MS Teams		
No. of Periods	TOPIC	Date	Mode of Delivery
VECTORS CO1: solve syste Seidel (L3) TB:" Engineeri	G SYSTEM OF LINEAR EQUATIONS, E em of linear algebraic equations using Ga ng Mathematics", Dr. T.K.V.Iyengar; S	uss elimination, Gauss J	
1	Introduction to matrices		
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		
5	PAQ form problems		
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B	From:	Lecture
8	Problems on rank method	10-05-2021	interspersed
9	Gauss Elimination method	10-03-2021	discussions
10	Eigen values – definition	To:	
11	Properties of Eigen values	29-05-2021	
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
CO2: Develop the applications (L6		s needed by engineers fo	r practical
B:" Engineerin	g Mathematics", Dr. T.K.V.Iyengar; S. Caley Hamilton theorem, verification, probl		Τ
	Caley Hamilion theorem, verification, problem	ems	

16	Finding inverse and power of a matrix by caley	THE TAX TO STATE A STATE OF THE	e come virus absolute es
	Hamilton theorem		
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	31-05-2021	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	12-06-2021	
22	Orthogonal reduction method	12-00-2021	
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		

#### **UNIT-III: UNIT-III: ITERATIVE METHODS:**

CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)

TB: "Engineering Mathematics", Dr. T.K.V. Iyengar; S. Chand publications

26	Introduction	From:	
		110111.	
27	Method – 1: Bisection method		
28	Problems	14-06-2021	
30	Method – 2: Regula falsi method		
31	Problems	To:	
33	Method – 3: Iteration method		
34	Problems	19-06-2021	Lecture
35	Method – 4: Newton Raphson method	_ &	interspersed
36	Problems	From:	with
37	Newton Raphson method simultaneous equations	20 06 2021	discussions
38	Gauss Jacobi Method	28-06-2021	
39	Gauss Seidal Method	То:	
40	problems	07-07-2021	

#### **UNIT – IV: INTERPOLATION**

CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

kward Differences
ac

42	Newton's Forward interpolation formula	An also see the second of the	Author State (1997) (State (1997)
43	Problems		
44	Newton's Backward interpolation formula		1
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems		interspersed
47	Problems	08-07-2021	with discussions
48	Gauss Backward interpolation formula – Problems	То:	discussions
49	Problems	24-07-2021	
50	Lagranges interpolation formula – Problems	2 7 07 2021	
51	Problems		
52	Operators		

# UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION

CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Ivengar; S.Chand publications

	ring Mathematics, Dr. 1.K. v. Iyengar; S. Chand	publications	
53	Trapezoidal rule		
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		
57	Taylor's series method	From:	Lecture interspersed
58	Problems	26-07-2021.	with discussions
59	Picard's method of successive approximation	To:	uiscussions
60	Euler's method	07-08-2021	
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

S. Kalpane
Signature of Faculty

Signature of HOD

# TENTATIVE LESSON PLAN: R201207

Section :C	e: Applied Physics S D Date: 10	.05.2021	Page No	: 00
Revision N		By : Dr. J. Ashok		d By : HOD
Tools:				
No. of Periods	TOPI	C	DATE	Mode of Delivery
UNIT-I	Wave Optics			
	CO1: Analyze the differences	between interference and		
	diffraction with application	ns. And illustrate the		Lecture
	resolving power of various op	tical instruments.		intersperse
1	INTERFERENCE: Introduc			with
2	Principle of Superposition			discussion
3	Principle of Superposition		From:	
4	Coherent Sources-Types Interference- Types			
5	Interference in Thin Films		10/05/2021	
6	Colours in Thin Film	•	_	
7			To:	
	Newton's Rings		02/06/2021	
8	Applications of Interference		03/06/2021	
9	Problems			
10	Diffraction: Introduction			
11	Fresnel and			
	Fraunhoffer Diffraction			
12	Fraunhoffer diffraction at sing	le clit		
13	Fraunhoffer diffraction at sing			T
14	Fraunhoffer diffraction at Dou			Lecture
15	Fraunhoffer diffraction at N-S			intersperse with
16	Grating Equation	1113		discussion
17	Dispersive Power of Grating			discussion
18	Resolving Power of Grating			
19	Problems			
20	Polarization: Introduction			
21	Types of Polarization			
22	Polarization by Reflection, Ref	raction		
23	Polarization by Duoble Refrac			
24	Nicol Prism			
25	Quarter Wave & Half Wave Pl	ates and Problems		
UNIT- II	Lasers and Fiber Optics	1100101115		Lecture
	CO2: Explain various types o	f emission of radiation		interspersed
	Identify the role of laser in eng	ineering applications.		with
	Identify the applications of opt			discussions
	communication and other field			
	concepts in various fields.	1		
26	Lasers: Introduction			
27	Characteristics of Laser			
28	Spontaneous and Stimulated en	nission		
29	Einstein's Coefficients			
30	Population Inversion, Lasing ac	etion		
31	Pumping Mechanism-Pumping	method		

32	Ruby Laser		
33	Helium Neon Laser	-	
		1	
34	Applications of Lasers		
35	Fiber Optics: Introduction	-	
36	Principle of Optical Fiber		
37	Acceptance angle and Numerical Aperture	1	Lecture
38	Classifications optical fibers based on refractive index		interspersed
20	profile and modes	-	with
39	Propagation of electromagnetic wave through optical		discussions
10	fibers, applications	1	
40	Problems		
UNIT -III	Quantum Mechanics, Free Electron Theory and		
	Band theory		
	CO3: Describe the dual nature of matter. Identify the		
	role of Schrodinger's time independent wave equation in studying particle in one-dimensional infinite		
		From:	
	potential well. Identify the role of classical and quantum free electron theory in the study of electrical	17-06-2021	
	conductivity.	To	
41	Quantum Mechanics: Introduction	06-07-2021	
42	Dual Nature of Matter	00 07 2021	
43	Heisenberg's Uncertainty Principle, Significance and	-	
43	properties of wave function		
44	Schrodinger Time Independent Equation	1	
45	Schrodinger Time Independent Equation  Schrodinger Time Dependent Equation		
	Particle in a Box		
46			Lecture
47	Problems		interspersed
48	Free Electron Theory: Introduction		with
49	Classical free electron theory- merits and demerits		discussions
50	Quantum free electron theory- merits and demerits		
51	Equation for electrical conductivity based on quantum		
	free electron theory		
52	Fermi-Dirac distribution, Fermi energy.		
53	Density of states (3D)		34.4
54	Problems		
55	Band theory of Solids :Introduction		
56	Bloch's Theorem, Kronig - Penney model		
57	E vs K diagram - v vs K diagram		
58	Effective Mass of Electron, Concept of Hole		
59	Energy Bands in Crystalline Solids Classification		
UNIT-IV	Dielectric and Magnetic Materials	From	
	CO4: Explain the concept of dielectric constant and	08-07-2021	
	polarization in dielectric materials. Explain the	То	
	applications of dielectric and magnetic materials.	24-07-2021	
	Apply the concept of magnetism to magnetic devices.		
60	Dielectric Materials: Introduction, Dielectric		
	polarization		
61	Types of polarizations- Electronic polarisation		Lecture
62	Ionic polarisation, Orientation polarizations	1	intersperse
63	Lorentz internal field		with
64	Clausius-Mossotti equation, Piezoelectricity.		discussion
-65	Magnetic Materials: Introduction	eri Priente din	
66	Magnetic dipole moment, Magnetization, Magnetic		Million Story
median harden	susceptibility and permeability		

67	Origin of permanent magnetic moment		
68	Classification of magnetic materials: Dia, para, Ferro, antiferro and Ferri magnetic materials		
69	Domain concept for Ferromagnetism, Domainwalls		
.70	Hysteresis soft and hard magnetic materials	A B B B B B B B B B B B B B B B B B B B	
71	Eddy currents, Engineering applications and Problems	7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
UNIT – V	Semiconductors and Superconductors		
	CO5: Explain the properties of charge carriers in	From	
	semiconductors . Identify the type of semiconductor	26-07-2021	
	using Hall effect . Identify applications of	То	
	semiconductors in electronic devices. Explain	07-08-2021	
	Meissner's effect, BCS theory & Josephson effect in		
	superconductors.		
72	Semiconductors: Introduction, Intrinsic		
	semiconductors		
73	Density of charge carriers ,Electrical conductivity,		Lecture
	Fermi level		interspersed
74	Extrinsic semiconductors, density of charge carriers,		with
	Dependence of Fermi energy on carrier concentration		discussions
	and temperature		
75	Drift and diffusion currents – Einstein's equation		
76	Hall effect, Hall coefficient, Applications of Hall effect		
77	Superconductors: Introduction – Properties of		
	superconductors		
78	Meissner effect, Type I and Type II superconductors		
70	BCS theory, Josephson effects		
	(AC and DC)		
80	SQUID's – High Tc superconductors, Applications of		
	superconductors		

Signature of Faculty

Signature of HOD



Enikepadu, Vijayawada, 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Department of Science and Humanities

#### TENTATIVE LESSON PLAN R201218/R20 DATA STRUCTURES

Course Title:	DATA STRUCTURES (R201218)	
Section : CSD	Date: 09/05/2021	Page No: 01 of 03
Revision No: 00	Prepared By : Dr. B. Srikanth	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
Unit-1: I	ntroduction to Data Structures, Searching & Sorting Techni	ques	
CO1: U	nderstand the basic concepts of data structures and Sun	nmarize the co	oncept about
searchin	g & sorting techniques		
TB:" Da	ta Structures Using C. 2nd Edition, Reema Thareja, Oxford	"	
1	Data Structures - Definition		
2	Classification of Data Structures		
3	Operations on Data Structures, Abstract Data Type (ADT)		
4	Preliminaries of algorithms, Time and Space complexity		
5	Searching - Linear search	From:	Lecture
6	Binary search	11/05/2021	Interspersed With MS Teams
7	Fibonacci search		
8	Sorting- Insertion sort	To:27/05/20	
9	Selection sort	21	
10	Exchange -Bubble sort		
11	Exchange -Quick sort		
12	Distribution (radix sort)		
13	Merging (Merge sort)		
14	Tutorial		
UNIT-II	: Linked List Concepts		
CO2: In	plement different Linked List Algorithms		
TB:" Da	ta Structures Using C. 2nd Edition, Reema Thareja, Oxford		
10	Linked List: Introduction, Single linked list		
11	Representation of Linked list in memory		
12	Operations on Single Linked list-Insertion		
13	Deletion		
14	Search and Traversal		
15	Reversing Single Linked list	F20/05	T
16	Applications on Single Linked list - Polynomial Expression	From:29/05	Lecture



Enikepadu, Vijayawada, 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Department of Science and Humanities

	Representation	/2021	interspersed
17	Addition and Multiplication	To:	with
18	Sparse Matrix Representation using Linked List	19/06/2021	MS Teams
19	Advantages and Disadvantages of Single Linked list		
20	Double Linked list-Insertion		
21	Deletion		
22	Circular Linked list-Insertion		
23	Deletion.		
24	Tutorial		
No. of Period	TOPIC	Date	Mode of Delivery
TB:" [	Describe Stack and Queue operations Data Structures Using C. 2nd Edition, Reema Thareja, Oxfor	rd "	
25	Queues: Introduction to Queues		
26	Representation of Queues-using Arrays Representation of		
	Queues-using Linked list		
27			
27	Implementation of Queues-using Arrays		T
28	Implementation of Queues-using Arrays Implementation of Queues-using Linked list	From 21/06	Lecture
28 29	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues	From:21/06	intersperse
28 29 30	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues	From:21/06 /2021	intersperse with MS
28 29 30 31	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues Stacks: Introduction to Stacks	/2021	intersperse
28 29 30 31 32	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues Stacks: Introduction to Stacks Array Representation of Stacks	/2021 To:	intersperse with MS
28 29 30 31 32 33	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues Stacks: Introduction to Stacks Array Representation of Stacks Operations on Stacks	/2021	intersperse with MS
28 29 30 31 32 33 34	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues Stacks: Introduction to Stacks Array Representation of Stacks Operations on Stacks Linked list Representation of Stacks	/2021 To:	interspersed with MS
28 29 30 31 32 33 34 35	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues Stacks: Introduction to Stacks Array Representation of Stacks Operations on Stacks Linked list Representation of Stacks Operations on Linked Stack	/2021 To:	interspersed with MS
28 29 30 31 32 33 34 35 36	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues Stacks: Introduction to Stacks Array Representation of Stacks Operations on Stacks Linked list Representation of Stacks Operations on Linked Stack Applications-Reversing list	/2021 To:	interspersed with MS
28 29 30 31 32 33 34 35 36 37	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues Stacks: Introduction to Stacks Array Representation of Stacks Operations on Stacks Linked list Representation of Stacks Operations on Linked Stack Applications-Reversing list Factorial Calculation,	/2021 To:	interspersed with MS
28 29 30 31 32 33 34 35 36 37 38	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues Stacks: Introduction to Stacks Array Representation of Stacks Operations on Stacks Linked list Representation of Stacks Operations on Linked Stack Applications-Reversing list Factorial Calculation, Infix to Postfix Conversion	/2021 To:	interspersed with MS
28 29 30 31 32 33 34 35 36 37	Implementation of Queues-using Arrays Implementation of Queues-using Linked list Application of Queues-Circular Queues, Dequeues Priority Queues, Multiple Queues Stacks: Introduction to Stacks Array Representation of Stacks Operations on Stacks Linked list Representation of Stacks Operations on Linked Stack Applications-Reversing list Factorial Calculation,	/2021 To:	interspersed with MS

TB:" Data Structures Using C. 2nd Edition, Reema Thareja, Oxford "

No. of Periods	TOPIC	Date	Mode of Delivery
41	Trees: Basic Terminology in Trees		
42	Binary Trees-Properties		
43	Representation of Binary Trees using Arrays and Linked lists	From:	
44	Binary Search Trees- Basic Concepts	13/07/2021	



Enikepadu, Vijayawada, 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Department of Science and Humanities

45	BST Operations: Insertion, Deletion, Tree Traversals	To:	Lecture interspersed
46	Applications-Expression Trees	26/07/2021	
47	Heap Sort		with
48	Balanced Binary Trees AVL Trees		MS Teams
49	Insertion, Deletion and Rotations		
50	Tutorial		
UNIT-	V: Graphs Concepts		
CO5: k	nowledge of Graph concepts		
TB:" D	ata Structures Using C. 2nd Edition, Reema Thareja, Oxfo	ord "	
51	Graphs: Basic Concepts		
52	Representations of Graphs		
53	Adjacency Matrix and using Linked list		
54	Graph Traversals (BFT & DFT)		
55	Applications- Minimum Spanning Tree Using Prims Algorithm	From: 27/07/2021	Lecture
56	Kruskals Algorithm	To:10/08/2	with
59	Dijkstra's shortest path,	021	MS Teams
60	Transitive closure		
61	Warshall's Algorithm		
	Waishan Singonami	4	

B. Sni wan 1 h Signature of Faculty

Signature of HOD

### TENTATIVE LESSON PLAN: R20ES120122/ DIGITAL LOGIC DESIGN

Course Title: D	IGITAL LOG	IC DESIGN		
Section : CSE	-BIGDATA	Date: 17/05/2021	Page No	: 1 to 4
Revision No: 00	)	Prepared By : T.Vishnu Priya	Approve	d By : HOD
Tools: MS Tean	ns, Black boar	d, PPTs		
S.NO.		TOPIC	Date	Mode of Delivery
UNIT-I Digital	Systems and	Binary Numbers		
CO1: An abilit	y to define d	ifferent number systems. Binary	addition and	subtraction, 2's
complement repr	resentation and	operations with this representation	<b>).</b>	
TB1: Digital De		is Mano, Michael D Ciletti, PEA.		
1		ms and Binary Numbers		
		ns, Binary Numbers		
2		adecimal Numbers.		
3	Complements			
4	Signed Binary		From	Lecture
5	Arithmetic ad	ldition and subtraction.	17/05/2021	interspersed
6	4-bit codes, E	BCD code, BCD addition &	То	with
6	subtraction.		02/06/2021	discussions
7	EXCESS 3 co	de, addition & subtraction.		
8	Alphanumer	ric codes, 242 1, etc.		
o	9's & 10'scor	nplement.		
9	Tutorial			
UNIT-II Co	ncept of Book	ean algebra		
		the different switching algebra the	eorems and appl	ly them for logic
functions.				
CO3: An abilit	y to define the	e Karnaugh map for a few varia	bles and perform	n an algorithmic
reduction of logi		· ·		
TB1: Digital De	esign, 5/e, Mori	ris Mano, Michael D Ciletti, PEA.		

10	Concept of Boolean algebra Basic Theorems and Properties of Boolean algebra		
.11	Boolean Functions		Lecture interspersed
12	Canonical and Standard Forms		with
13	Minterms and Maxterms	From	discussions
14	Gate level Minimization	04/06/2021	
15	Map Method, Three-Variable K-Map	To	
16	Four Variable K-Maps. Products of Sum Simplification, Sum of Products Simplification	19/06/2021	
17	Don't - Care Conditions		Lecture
18	NAND and NOR Implementation, Exclusive OR Function.		interspersed with
19	Canonical and Standard Forms		discussions
20	Minterms and Maxterms		

#### **UNIT-III** Combinational Logic

CO4: Students will be able to design various logic gates starting from simple ordinary gates to complex programmable logic devices & arrays.

TB1: Digital Design, 5/e, Morris Mano, Michael D Ciletti, PEA.

21	Combinational Logic Introduction, Analysis		·
22	Binary Adder,		
23	Binary Subtractor, Binary Multiplier		
24	Decoders, Encoders		Lecture
25	Priority Encoder, Code Converters	From	interspersed
26	Multiplexers, Demultiplexer.	21/06/2021	with discussions
27	Magnitude Comparator	To	
28	HDL Models of Combinational Circuits.	14/07/2021	
29	Realization of Switching Functions Using PROM, PAL and PLA.		
30	Tutorial		

#### UNIT-IV Synchronous Sequential Logic

CO5: Students will be able to design various sequential circuits starting from flip-flop to registers and counters.

TB1: Digital Design, 5/e, Morris Mano, Michael D Ciletti, PEA.

31	Synchronous Sequential Logic Introduction to Sequential Circuits.		
32	Storage Elements: Latches, Flip-Flops.	From 16/07/2021 To 24/07/2021	Lecture interspersed with discussions
33	Flip-Flops, RS- Latch Using NANO and NOR Gates, Truth Tables		
34	RS, JK, T and D Flip Flops, Truth and Excitation Tables		
35	Conversion of Flip Flops		
36	Tutorial		

#### **UNIT-V** Registers and Counters

CO5: Students will be able to design various sequential circuits starting from flip-flop to registers and counters.

TB1: Digital Design, 5/e, Morris Mano, Michael D Ciletti, PEA

37	Registers and Counters Registers, Shift Registers,	From	Lecture interspersed with discussions
38	Synchronous Counters	26/07/2021 To	
39	Ripple Counters, Ring Counter, Johnson Counter	31/07/2021	
40	Tutorial		

TB1: Digital Design, 5/e, Morris Mano, Michael D Ciletti, PEA

TB2: Fundamentals of Logic Design, 5/e, Roth, Cengage.

TB3: Digital Logic and Computer Design, M.Morris Mano, PEA.

Signature of Faculty

Signature of HOD

### TENTATIVE LESSON PLAN: R201225 PYTHON PROGRAMMING

	Fitle: PYTHON PROGRAMMING (R201225)  : CSD Date: 06/05/2021	Page No: 01 o	
	No: 00 Prepared By: M.V.SUMANTH	Approved By	: HOD
	lack board, PPTs, Moodle		
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I	Data types, Decision Structures, Repetition Structures		
CO1:	To learn about the conceptual introduction, data ty	pes, variables	in pytho
orogran			
TR1: Fi	ndamentals of Python First Programs, Kenneth. A. Lambert, C	engage.	
1	Conceptual introduction: topics in computer science, algorithms;		
2	modern computer systems: hardware architecture,		
3	data representation in computers, software and operating system;	From:	
4	installing Python; basic syntax, interactive shell	11/05/2021	
5	editing, saving, and running a script.	To:	Online
6	The concept of data types; variables, assignments;	26/05/2021	
7	immutable variables; numerical types; arithmetic operators and expressions;		
8	comments in the program, understanding error messages;		
9	Tutorial		
python. TB1: F	To gain knowledge on Control statements, String Manipulat undamentals of Python First Programs, Kenneth. A. Lamber		oer system
10			
11	Conditions, boolean logic, logical operators; Ranges,		
11	Control statements: if-else, loops (for, while);		
12	Control statements: if-else, loops (for, while); short-circuit (lazy) evaluation,		
	Control statements: if-else, loops (for, while); short-circuit (lazy) evaluation, Strings and text files; manipulating files and directories, os		
12	Control statements: if-else, loops (for, while); short-circuit (lazy) evaluation, Strings and text files; manipulating files and directories, os and sys modules;		
12 13	Control statements: if-else, loops (for, while); short-circuit (lazy) evaluation, Strings and text files; manipulating files and directories, os and sys modules; text files: reading/writing text.		
12 13 14 15	Control statements: if-else, loops (for, while); short-circuit (lazy) evaluation, Strings and text files; manipulating files and directories, os and sys modules; text files: reading/writing text. numbers from/to a file	From:	
12 13 14 15 16	Control statements: if-else, loops (for, while); short-circuit (lazy) evaluation, Strings and text files; manipulating files and directories, os and sys modules; text files: reading/writing text. numbers from/to a file Creating and reading a formatted file (csv or tab-separated).	From: 27/05/2021	
12 13 14 15 16 17	Control statements: if-else, loops (for, while); short-circuit (lazy) evaluation, Strings and text files; manipulating files and directories, os and sys modules; text files: reading/writing text. numbers from/to a file Creating and reading a formatted file (csv or tab-separated). String manipulations: subscript operator,	27/05/2021	Online
12 13 14 15 16	Control statements: if-else, loops (for, while); short-circuit (lazy) evaluation, Strings and text files; manipulating files and directories, os and sys modules; text files: reading/writing text. numbers from/to a file Creating and reading a formatted file (csv or tab-separated).		Online

	Statement Conditional Iteration The While Loop		
15	Strings and Text Files: Accessing Character and Substring in Strings,	From:	
16	Data Encryption	31/05/2021	
17	Strings and Number Systems,		Online
18	String Methods	To: 19/6/2021	
19	Text Files		
20	Tutorial		
No. of Periods	TOPIC	Date	Mode of Delivery
usage. TB1: Fu 21	ndamentals of Python First Programs, Kenneth. A. Lambert, C. List and Dictionaries: Lists,	engage.	
22	Defining Simple Functions,		
23	Dictionaries		
24	Design with Function: Functions as Abstraction Mechanisms.		Online
25	Problem Solving with Top Down Design.		
26	Design with Recursive Functions	From: 21/06/2021	
27	Case Study Gathering Information from a File System,		
28	Managing a Program's Namespace,		
29	Higher Order Function.	To: 13/07/2021	
30	Modules: Modules, Standard Modules, Packages.		
31	Tutorial		
	V File Operations o assimilate about File operations, Object Oriented Programmiandamentals of Python First Programs, Kenneth. A. Lambert, C		
No. of	TOPIC	Date	Mode of
Periods			Delivery
32	UNIT IV File Operations: Reading config files in python, Writing log		
22	files in python,	-	
33	Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and		
	writelines(),		

34	Manipulating file pointer using seek, Programming using file operations		
35	Object Oriented Programming: Concept of class, object and instances, Constructor, class attributes and destructors,	From: 14/07/2021	
36	Real time use of class in live projects, Inheritance,		
37	overlapping and overloading operators, Adding and retrieving dynamic attributes of classes,	To: 30/07/2021	Online
38	Programming using Oops support		
39	Design with Classes: Objects and Classes, Data modelling Examples, Case Study An ATM,		
40	Structuring Classes with Inheritance and Polymorphism		
41	Tutorial		
UNIT-V	Exception Handling		
CO5: To	assimilate about Errors and Exceptions, Exception Handling a	nd Graphical U	ser Interfac
	ndamentals of Python First Programs, Kenneth. A. Lambert, Co	engage.	
42	Errors and Exceptions: Syntax Errors, Exceptions,		
43	Handling Exceptions, Raising Exceptions, User-defined		
	Exceptions, Defining Clean-up Actions, Redefined Clean-up	-	
	Actions.	From:	
44	Graphical User Interfaces: The Behavior of Terminal Based	31/07/2021	Online
	Programs and GUI -Based, Programs,		
45	Coding Simple GUI-Based Programs,	To:	
46	Other Useful GUI Resources. Programming: Introduction to Programming Concepts with Scratch.	14/08/2021	

Signature of Faculty

Tutorial

Signature of HOD

PRINCIPAL

### TENTATIVE LESSON PLAN: R201201

	ATHEMATICS - II		01 600
Section : CSE-		0	: 01 of 02
Revision No : 00		Approve	d By: HOD
Tools: Black bo No. of Periods	ard, PPT'S, MS Teams TOPIC	Date	Mode of Delivery
VECTORS CO1: solve syste Seidel (L3) TB:" Engineeri	G SYSTEM OF LINEAR EQUATIONS, EIGEN Vem of linear algebraic equations using Gauss eliming Mathematics", Dr. T.K.V.Iyengar; S.Chand	ination, Gauss Jo	
1	Introduction to matrices		•
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		
5	PAQ form problems		
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B	From:	Lecture
8	Problems on rank method	10-05-2021	interspersed with
9	Gauss Elimination method		discussions
10	Eigen values – definition	To:	
11	Properties of Eigen values	29-05-2021	
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
CO2: Develop to applications (Lo	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand	l by engineers fo	r practical
15	Caley Hamilton theorem, verification, problems		

16.2	Finding inverse and power of a matrix by caley Hamilton theorem	PROPERTY OF THE STATE OF THE ST	4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	31-05-2021	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	12-06-2021	
22	Orthogonal reduction method	12-00-2021	
23	Congruent operations method .		
24	Lagrange's method		
25	Problems on finding nature of a QF		

#### UNIT-III: UNIT - III: ITERATIVE METHODS:

CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)

TB: "Engineering Mathematics", Dr. T.K.V. Iyengar; S. Chand publications

	Introduction	From:	
26		FIOIII.	
27	Method – 1: Bisection method		
28	Problems	14-06-2021	
30	Method – 2: Regula falsi method		
31	Problems	To:	
33	Method – 3: Iteration method		
34	Problems	19-06-2021	Lecture
35	Method – 4: Newton Raphson method	&	interspersed
36	Problems	From:	with discussions
37	Newton Raphson method simultaneous equations	28-06-2021	discussions
38	Gauss Jacobi Method	26-00-2021	
39	Gauss Seidal Method	То:	
40	problems	07-07-2021	

#### **UNIT - IV: INTERPOLATION**

CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

41 Introduction: Forward and Backward Differences	

42	Newton's Forward interpolation formula	· of the part of the	
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems	08-07-2021	interspersed with
47	Problems	08-07-2021	discussions
48	Gauss Backward interpolation formula – Problems	То:	
49	Problems	24-07-2021	
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		

UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION

CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

1 D. Engineer	ring Mathematics, Dr. 1.R. v. Tyengar, S. Chand	publications	
53	Trapezoidal rule		
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule	From:	Lecture
57	Taylor's series method		interspersed
58	Problems	26-07-2021.	with discussions
59	Picard's method of successive approximation	To:	
60	Euler's method	07-08-2021	
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		200

Signature of Faculty

Signature of HOD

# TENTATIVE LESSON PLAN: R201201

Section : CSE-	ATHEMATICS - II  B Date: 10-05-2021	Page No	: 01 of 02
Revision No : 00			d By: HOD
	ard, PPT'S, MS Teams		
No. of Periods	TOPIC	Date	Mode of Delivery
VECTORS CO1: solve syste Seidel (L3) TB:" Engineeri	G SYSTEM OF LINEAR EQUATIONS, EIGEN VALUE on of linear algebraic equations using Gauss elimination of Mathematics", Dr. T.K.V.Iyengar; S.Chand publ	on, Gauss Jo	
1	Introduction to matrices		
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		Lecture interspersed with discussions
5	PAQ form problems		
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B	From:	
8	Problems on rank method	10-05-2021	
9	Gauss Elimination method		
10	Eigen values – definition	To:	
11	Properties of Eigen values	29-05-2021	
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		3.5
14	Problems on finding eigen values, vectors		
	EY-HAMILTON THEOREM, QUADRATIC FORMS the use of matrix algebra techniques that is needed by 6	engineers fo	r practical
	g Mathematics", Dr. T.K.V.Iyengar; S.Chand publi	ications	
15	Caley Hamilton theorem, verification, problems		

16	Finding inverse and power of a matrix by caley	r a mai r trainin a liprata de la cale de misi. Como esta por la cale de la cale de misi.	
	Hamilton theorem		
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	31-05-2021	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	12-06-2021	
22	Orthogonal reduction method	12 00 2021	
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		

#### UNIT-III: UNIT – III: ITERATIVE METHODS:

CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)

TB: "Engineering Mathematics", Dr. T.K.V. Iyengar; S. Chand publications

	Interded to	From:	
26	Introduction	From:	
27	Method – 1: Bisection method		
28	Problems	14-06-2021	
30	Method – 2: Regula falsi method		
31	Problems	To:	
33	Method – 3: Iteration method		
34	Problems	19-06-2021	Lecture
35	Method – 4: Newton Raphson method	&	interspersed
36	Problems	From:	with discussions
37	Newton Raphson method simultaneous equations	28-06-2021	discussions
38	Gauss Jacobi Method	28-00-2021	
39	Gauss Seidal Method	То:	
40	problems	07-07-2021	

#### **UNIT - IV: INTERPOLATION**

CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

41	Introduction: Forward and Backward Differences	

42	Newton's Forward interpolation formula	A MELTINE CONTRACTOR OF THE STATE OF THE STA	1 m
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems	00 07 2021	interspersed with
47	Problems	08-07-2021	discussions
48	Gauss Backward interpolation formula –	То:	
	Problems		
49	Problems	24-07-2021	
50	Lagranges interpolation formula – Problems		
51	Problems	E . SA	
52	Operators		

UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION

CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

53	Transported mile		
33	Trapezoidal rule		
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule	Г	Lastona
57	Taylor's series method	From:	Lecture interspersed
58	Problems	26-07-2021.	with discussions
59	Picard's method of successive approximation	To:	
60	Euler's method	07-08-2021	
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

Signature of Faculty

Signature of HOD



#### SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA 521108

Department Of Sciences And Humanities

SRKIT / S & H/12

### **TENTATIVE LESSON PLAN: R201115**

Course	Title: APPL	IED CHEMISTRY			
Section	: CSE-A	Date: 24-05- 2021	Page No	: 1-3	
Revision	n No :00	Prepared By: Dr.T.V.Nagalakshmi	Approve	ed By:	HOD
<b>Tools:</b>					
No. of P	eriods	TOPIC	Date	Mod	le of Delivery
		UNIT - I: POLYMER TECHNOL			
CO: An	alyze the diff	ferent types of composite plastic materials and	d interpret the	mechai	nism of
conducti	ion in conduc	eting polymers		•	
1	Polymerisa	tion: - Introduction, methods of			
	polymeriza	tion (emulsion and suspension), mechanical			
	properties.				
2	Plastics: Co	mpounding, fabrication (compression,			
	injection, b	lown film and extrusion)			
3	preparation	properties and applications (PVC,			
	polycarbona	ates and Bakelite)	From: 24-05	-2021	
4	Mention so	me examples of plastic materials used in			Lecture
	electronic g	adgets, recycling of e-plastic waste (waste	To: <b>07-06-</b> 2	2021	Interspersed
	to wealth).				With
5	Elastomers:	- Introduction, preparation, properties and	Discus		Discussions
		(Buna S, thiokol and polyurethanes)			
6		sed in electronic gadgets, recycling of e-			
	plastic wast				
7		materials: Fiber reinforced plastics,			
	conducting				
8		ole polymers, biopolymers, biomedical			
	polymers.				
	UNIT	T-II :ELECTROCHEMICAL CELLS AND	CORROSIO	ON	
CO: Uti	ilize the theo	ry of construction of electrodes, batteries and	fuel cells in r	edesign	ing new
engineer	ing products	and categorize the reasons for corrosion and s	study methods	s to con	trol corrosion
1	Single elec	trode potential, electrochemical series and			
	uses of seri				Lecture
2		ydrogen electrode, calomel electrode,			Interspersed
		n of glass electrode			With
3	Batteries (I	Ory cell, Li ion battery and zinc air cells)			Discussions
4	Fuel cells (	H2-O2, CH3 OH-O2, phosphoric acid and			
	molten carl	(1) [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]			



#### SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA 521108

SRKIT / S & H/12

1 TO STUTTON	ECHNOLOGY DA	Department Of Sciences And Humanit	ies	
5		n:-Definition, theories of corrosion (chemical cochemical)	From: <b>09-06-2021</b>	
6		corrosion, differential aeration corrosion, rosion, galvanic series	To: 24-06-2021	
7	Factors in	ifluencing rate of corrosion, corrosion controlesigning and cathodic protection)		
8	Protective	e coatings (surface preparation, cathodic anodic coatings,		
9	Electropla	ating and electroless plating [nickel])		
10	Paints (co	enstituents, functions and special paints)		
• 5		anomaterials for modern advances of engineen the preparation of semiconductors; analyze the		uid crystals and
1	_			
2	Semicondi	on-elemental semiconducting materials actor devices (p-n junction diode as unction transistor		
3	Insulators	& magnetic materials: electrical insulators	From: 25-06-2021	
4		ferri magnetism-Hall effect and its	To: <b>17-07-2021</b>	
5		ano materials:- Introduction-sol-gel		Lecture
6	Characteria	zation by BET, SEM and TEM methods		Interspersed
7	Applicatio fullerenes:	ns of graphene-carbon nanotubes and		With Discussions
8	Types, pre	paration and applications Liquid crystals		
9	Introducti	on-types-applications. Super conductors:- ype II-characteristics and applications.		
UNIT IV		ROSCOPIC TECHNIQUES & NON CON	VENTIONAL ENEI	RCV SOURCES
Cos:	• Analy	vze the principles of different analytical instrum n models for energy by different natural source	nents and their applica	
1.	Part A: SF	PECTROSCOPIC TECHNIQUES		
2.		gnetic spectrum-UV, laws of absorption,		
		ation, theory of electronic spectroscopy,		
3		don principle, chromophores and		
	auxocinon			
4.		nifts, applications		



#### SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA 521108

SRKIT / S & H/12

24/5/21

#### Department Of Sciences And Humanities

6.	Magnetic resonance imaging and CT scan (procedure & applications).	From: 19-07-2021	Interspersed With
7.	Part B: NON CONVENTIONAL ENERGY SOURCES	To: <b>04-08-2021</b>	Discussions
8.	Design, working, schematic diagram, advantages and disadvantages of photovoltaic cell,		
9.	Hydropower, geothermal power,		
10.	Tidal and wave power		
COs	UNIT V: ADVANCED CONCEPTS/TOPIC S: Obtain the knowledge of computational chemistry and		
1	Computational chemistry: Introduction to computational chemistry		
2.	Molecular modeling and docking studies	From: 05-08-2021	
3.	Molecular switches: characteristics of molecular motors and machines	To: <b>22-08-2021</b>	
4.	Rotaxanes and Catenanes as artificial molecular machines,		Lecture Interspersed
5.	prototypes linear motions in rotaxanes,		With
6.	An acid-base controlled molecular shuttle		Discussions
7.	A molecular elevator		
8.	An autonomous light-powered molecular motor		

FACULTY SIGNATURE

PRINCIPAL



#### SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA 521108

Department Of Sciences And Humanities

SRKIT / S & H/12

### **TENTATIVE LESSON PLAN: R201115**

Course '	Title: APPLI	ED CHEMISTRY				
Section	: CSE-B	Date: 24-05-2021	Page No	: 1-3		
Revision	No :00	Prepared By : Dr.T.V.Nagalakshmi	Approved By:		HOD	
<b>Tools:</b>						
No. of P	eriods	TOPIC	Date	Mod	de of Delivery	
CO: Ana	alyze the difference on in conduct Polymerisate polymerizati properties.  Plastics: Corrinjection, blood preparation, polycarbonare Mention some electronic gas to wealth).  Elastomers:-applications  Materials use plastic waste Composite in conducting presented to the conducting pre	unit – I: Polymer Technol erent types of composite plastic materials and ing polymers ion: – Introduction, methods of on (emulsion and suspension), mechanical inpounding, fabrication (compression, own film and extrusion) properties and applications (PVC, tes and Bakelite) ne examples of plastic materials used in idgets, recycling of e-plastic waste (waste  Introduction, preparation, properties and (Buna S, thiokol and polyurethanes) ed in electronic gadgets, recycling of e- inaterials: Fiber reinforced plastics,	LOGY	mechan		
CO: Uti engineer  1  2  3	Single elect uses of serie Standard hy construction	rode potential, electrochemical series and es electrode, calomel electrode, and glass electrode electrode, and glass electrode	fuel cells in	redesign	Lecture Interspersed With Discussions	
4	Fuel cells (I	H2-O2, CH3 OH-O2, phosphoric acid and onate)				



#### SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA 521108

SRKIT / S & H/12

#### Department Of Sciences And Humanities

5	<i>Corrosion:</i> -Definition, theories of corrosion (chemical and electrochemical)	From: 09-06-2021	
6	Galvanic corrosion, differential aeration corrosion,		
	stress corrosion, galvanic series	To: <b>24-06-2021</b>	
7	Factors influencing rate of corrosion, corrosion control		
	(proper designing and cathodic protection)		
8	Protective coatings (surface preparation, cathodic		
	coatings, anodic coatings,		
9	Electroplating and electroless plating [nickel])		
10	Paints (constituents, functions and special paints)		
	TIME III A COMPANY OF THE PARTY		200000000000000000000000000000000000000

#### **UNIT-III: MATERIAL CHEMISTRY**

#### COs:

- Synthesize nanomaterials for modern advances of engineering technology.
- Summarize the preparation of semiconductors; analyze the applications of liquid crystals and superconductors.

1	Part I: Non-elemental semiconducting materials		
2	Semiconductor devices (p-n junction diode as rectifier, junction transistor		
3	Insulators & magnetic materials: electrical insulators	From: 25-06-2021	
4	Ferro and ferri magnetism-Hall effect and its applications.	To: 17-07-2021	
5	Part II: Nano materials:- Introduction-sol-gel method-		Lecture
6	Characterization by BET, SEM and TEM methods		Interspersed
7	Applications of graphene-carbon nanotubes and fullerenes:		With Discussions
8	Types, preparation and applications Liquid crystals	1	
9	Introduction-types-applications. Super conductors:- Type –I, Type II-characteristics and applications.		

# UNIT- IV: SPECTROSCOPIC TECHNIQUES & NON CONVENTIONAL ENERGY SOURCES Cos:

- Analyze the principles of different analytical instruments and their applications.
- Design models for energy by different natural sources.

1.	Part A: SPECTROSCOPIC TECHNIQUES	
2.	Electromagnetic spectrum-UV, laws of absorption,	
	instrumentation, theory of electronic spectroscopy,	
3	Frank-Condon principle, chromophores and	
	auxochromes,	
4.	Intensity shifts, applications	
5.	FT-IR (instrumentation and IR of some organic	
	compounds, applications).	Lec



#### SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA 521108

SRKIT / S & H/12

### Department Of Sciences And Humanities

6.	Magnetic resonance imaging and CT scan (procedure & applications).	From: 19-07-2021	Interspersed With
7.	Part B: NON CONVENTIONAL ENERGY SOURCES	To: <b>04-08-2021</b>	Discussions
8.	Design, working, schematic diagram, advantages and disadvantages of photovoltaic cell,		
9.	Hydropower, geothermal power,		
10.	Tidal and wave power		
COs	UNIT- V: ADVANCED CONCEPTS/TOPIC s: Obtain the knowledge of computational chemistry and		
1	Computational chemistry: Introduction to	inoicediai macinines	
2.	computational chemistry  Molecular modeling and docking studies	From: <b>05-08-2021</b>	•
3.	Molecular switches: characteristics of molecular motors and machines	To: 22-08-2021	
4.	Rotaxanes and Catenanes as artificial molecular machines,		Lecture Interspersed
5.	prototypes linear motions in rotaxanes,		With
6.	An acid-base controlled molecular shuttle		Discussions
7.	A molecular elevator		
8.	An autonomous light-powered molecular motor		

daks 34/5/21 FACULTY SIGNATURE

PRINCIPAL

SRK Institute of Technology ENIKEPADU. VIJAYAWADA-521 109

### TENTATIVE LESSON PLAN: R201216

	tle : COMPUTER ORGANIZATION Sec A Date : 10-05-2021		
Section:	No: 00 Prepared By: A. KALYAN KUMAR	Annuariad I	Dr HOD
	TEAMS, PPTs	Approved I	sy: HOD
No. of	TOPIC	Date	Mode of
Periods	TOTIC	Date	Delivery
	DIGITAL COMPUTERS AND DATA REPRESENTA	ATION BOOL	
	GICAL GATES	mon, boot	Em Medebia
	monstrate and understanding of the design of the functional	al units of a digi	tal computer
system.	c c		
CO-2: Re	ate Postulates of Boolean algebra and minimize combinati	ional functions	
Text Book	: Digital Logic and Computer Design, Moriss Mano, 11th	Edition, Pearson	nEducation.
Computer	System Architecture, 3 <sup>rd</sup> ed., M.Morris Mano, PHI		
1.	Introduction, Number Systems		
2.	Decimal To Binary Conversion		
3.	Binary Coded Decimal Numbers		
4.	Weighted Codes		
5.	Self – Complementing Codes		
6.	Cyclic Codes		Online Classes With Ms Teams
7.	Error Detecting Codes		
8.	Error Correcting Codes		
9.	Hamming Code For Error Correction		
10.	Alphanumeric Codes		
11.	ASCI Code	17.05.2021	
12.	Data Types, Complements	17-05-2021	
13.	Fixed Point Representation	То	
14.	Floating Point Representation	05-06-2021	
15.	Theorems And Properties		
16.	Boolean Functions		
17.	Canonical And Standard Forms		
18.	Minimization Of Boolean Functions Using Algebraic Identities		
	Karnaugh Map Representation And Minimization	-	
19.	Using Two And Three Variable K - Maps		
20.	Logic Gates, Universal Gates		
	Two Level Realizations Using Logic Gates: AND –	-	
21.	OR, OR – AND, NAND – NAND, And NOR – NOR		
	Structures		
	DIGITAL LOGIC CIRCUITS, SEQUENTIAL SWITC		
CO-3: Red	cognize and manipulate representations of numbers stored	in digital compu	iters.
CO-4:Bui	ld the logic families and realization of logic gates		
Text Book	: Digital Logic and Computer Design, Moriss Mano, 11th	Edition, Pearson	Education.
22.	Combinational Circuits: Introduction		
23.	Combinational Circuit Design Procedure		
24.	Implementation Using Universal Gates	06-06-2021	Online Class
25.	Multi Bit Adder	То	Online Classes With Ms Teams
26.	Multiplexers	26-06-2021	
27.	De – Multiplexers		
28.	Decoders		

29.	Latches And Flip – Flops		Online Classes With Ms Teams
30.	Ripple Counters Using T Flip – Flops	06-06-2021 TO	
31.	Synchronous Counters: Shift Registers	26-06-2021	
32.	Ring Counters	20 00 2021	

# UNIT -3: COMPUTER ARITHMETIC, REGISTER TRANSFER LANGUAGE AND MICRO OPERATIONS, BASIC COMPUER ORGANIZATION AND DESIGN

CO5: Design and analyze combinational and sequential circuits

Text Book: Computer System Architecture, 3<sup>rd</sup>ed., M.MorrisMano, PHI

20110 200111			
33.	ADDITION AND SUBTRACTION		
34.	MULTIPICATION ALGORITHMS		Online Classes With Ms Teams
35.	BOOTHS MULTIPICATION ALGORITHMS		
36.	DIVISION ALGORITHMS		
37.	FLOATING - POINT ARITHMETIC OPERATIONS		
38.	BUS AND MEMORY TRANSFER		
39.	ARITHMETIC AND LOGICAL MICRO OPERATIONS	28-06-2021 TO	
40.	SHIFT AND ROTATE MICRO OPERATIONS		
41.	STORED PROGRAM CONCEPT	11-07-2021	
42.	COMPUTER REGISTERS		
43.	COMMON BUS SYSTEM		
44.	COMPUTER INSTRUCTIONS		
45.	TIMING AND CONTROL		
46.	INSTRUCTION CYCLE		
47.	MEMORY REFERENCE INSTRUCTIONS		
48.	INPUT – OUPUT CONFIGURATION		
49.	PROGRAM INTERRUPT		

#### UNIT - 4: MICRO PROGRAMMED CONTROL, CENTRAL PROCESSING UNIT

CO6: Recall the internal organization of computers, CPU, memory unit and Input/Outputs and the relations between its main components

Text Book: Computer System Architecture, 3<sup>rd</sup>ed., M.MorrisMano, PHI

No. of Periods	TOPIC	DATE	Mode of Delivery
50.	Control Memory		
51.	Address Sequencing		
52.	Micro Program Example		Online Classes With Ms Teams
53.	Design Of Control Unit		
54.	General Register Organization	12-07-2021	
55.	Instruction Formats	TO 25-07-2021	
56.	Addressing Modes	23 07 2021	
57.	Data Transfer And Manipulation		
58.	Program Control: Conditional Flags And Branching		

UNIT - 5: MEMORY ORGANIZATION, INPUT - OUTPUT ORGANIZATION

CO7: Solve elementary problems by assembly language programming

Text Book: Computer System Architecture, 3<sup>rd</sup>ed., M.MorrisMano, PHI

Signature of the Faculty

Signature of the HOD

PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

### TENTATIVE LESSON PLAN: R201216

Course Titl	TENTATIVE LESSON PLAN: R2 le : COMPUTER ORGANIZATION	U1410	
Section : S			
	o: 00 Prepared By: A. KALYAN KUMAR	Approved B	By : HOD
	TEAMS, PPTs		
No. of	TOPIC	Date	Mode of
Periods			Delivery
UNIT-1: D	IGITAL COMPUTERS AND DATA REPRES	SENTATION, BOOL	EAN ALGEBRA
	ICAL GATES		
CO-1: Den	nonstrate and understanding of the design of the fu	nctional units of a digit	tal computer
system.			
	ate Postulates of Boolean algebra and minimize con		T.L.
	Digital Logic and Computer Design, Moriss Man	o, 11thEdition, Pearson	neducation.
Computer S	System Architecture, 3 <sup>rd</sup> ed., M.Morris Mano, PHI		
		<u> </u>	
1.	Introduction, Number Systems		
2.	Decimal To Binary Conversion		
3.	Binary Coded Decimal Numbers		
4.	Weighted Codes		
5.	Self – Complementing Codes		
6.	Cyclic Codes		Online Classes With Ms Teams
7.	Error Detecting Codes		
8.	Error Correcting Codes		
9.	Hamming Code For Error Correction		
10.	Alphanumeric Codes		
11.	ASCI Code	17-05-2021	
12.	Data Types, Complements	To	
13.	Fixed Point Representation		
14.	Floating Point Representation	05-06-2021	
15.	Theorems And Properties		
16.	Boolean Functions		
17.	Canonical And Standard Forms		
18.	Minimization Of Boolean Functions Using Algel	oraic	
	Identities		
19.	Karnaugh Map Representation And Minimization Using Two And Three Variable K - Maps	1	
20.	Logic Gates, Universal Gates		
20.	Two Level Realizations Using Logic Gates: ANI	)_	
21.	OR, OR – AND, NAND – NAND, And NOR – 1		
21.	Structures	ion	
UNIT-2: I	DIGITAL LOGIC CIRCUITS, SEQUENTIAL	SWITCHING CIRCU	JITS
	ognize and manipulate representations of numbers		
	ld the logic families and realization of logic gates		
	: Digital Logic and Computer Design, Moriss Mar	o. 11thEdition. Pearso	nEducation.
22.	Combinational Circuits: Introduction		
23.	Combinational Circuit Design Procedure		
24.	Implementation Using Universal Gates	04.04.2021	
		06-06-2021 To	Online Classes
25.	Multi Bit Adder	26-06-2021	With Ms Team
26.	Multiplexers		6.5
27.	De – Multiplexers		
28.	Decoders		

29.	Latches And Flip – Flops	0.000.001	Online Classes With Ms Teams
30.	Ripple Counters Using T Flip – Flops	706-06-2021 TO	
31.	Synchronous Counters: Shift Registers	26-06-2021	
32.	Ring Counters		
UNIT -3: 0	COMPUTER ARITHMETIC, REGISTER TRANSFE	R LANGUAG	E AND MICRO
<b>OPERATIO</b>	ONS, BASIC COMPUER ORGANIZATION AND D	ESIGN	
	n and analyze combinational and sequential circuits		
Text Book:	Computer System Architecture, 3 <sup>rd</sup> ed., M.MorrisMano,	РНІ	
33.	ADDITION AND SUBTRACTION		
34.	MULTIPICATION ALGORITHMS		
35.	BOOTHS MULTIPICATION ALGORITHMS		
36.	DIVISION ALGORITHMS		
37.	FLOATING - POINT ARITHMETIC OPERATIONS		
38.	BUS AND MEMORY TRANSFER		

28-06-2021

TO

11-07-2021

Online Classes

With Ms Teams

UNIT – 4: MICRO PROGRAMMED CONTROL, CENTRAL PROCESSING UNIT

**CO6:** Recall the internal organization of computers, CPU, memory unit and Input/Outputs and the relations between its main components

Text Book: Computer System Architecture, 3<sup>rd</sup>ed., M.MorrisMano, PHI

MEMORY REFERENCE INSTRUCTIONS

INPUT - OUPUT CONFIGURATION

ARITHMETIC AND LOGICAL MICRO

STORED PROGRAM CONCEPT

COMPUTER REGISTERS

COMMON BUS SYSTEM

TIMING AND CONTROL

INSTRUCTION CYCLE

PROGRAM INTERRUPT

COMPUTER INSTRUCTIONS

SHIFT AND ROTATE MICRO OPERATIONS

**OPERATIONS** 

39.

40.

41.

42.

43.

44.

45.

46.

47.

48.

49.

No. of Periods	TOPIC	DATE	Mode of Delivery
50.	Control Memory		
51.	Address Sequencing		
52.	Micro Program Example		
53.	Design Of Control Unit	1.2.05.000.	
54.	General Register Organization	12-07-2021 TO	Online Classes
55.	Instruction Formats	25-07-2021	With Ms Teams
56.	Addressing Modes		
57.	Data Transfer And Manipulation		
58.	Program Control: Conditional Flags And Branching		

UNIT - 5: MEMORY ORGANIZATION, INPUT - OUTPUT ORGANIZATION

CO7: Solve elementary problems by assembly language programming

Text Book: Computer System Architecture, 3<sup>rd</sup>ed., M.MorrisMano, PHI

59.	MEMORY HIERARCHY		
60.	MAIN MEMORY		
61.	AUXILIARY MEMORY		
62.	ASSOCIATIVE MEMORY	26.07.2021	
63.	CACHE MEMORY	26-07-2021 TO	Online Classes
64.	INPUT – OUTPUT INTERFACE	14-08-2021	With Ms Teams
65.	ASYNCRONOUS DATA TRANSFER	11.002021	
66.	MODES OF TRANSFER		
67.	PRIORITY INTERRUPT		
68.	DIRECT MEMORY ACCESS		

d column Signature of the HOD

PRINCIPAL

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

### **TENTATIVE LESSON PLAN: R201218**

	itle : DATA STRUCTURES		
Section :			
	No: 00   Prepared By: Dr D. HARITHA	Approved I	By: HOD
	S TEAMS, PPTs	,	
No. of	TOPIC	Date	Mode of
Periods	DATA STRUCTURES SEARCHING SORTING		Delivery
	DATA STRUCTURES, SEARCHING, SORTING mmarize the properties, interfaces, and behaviours of basic	abatmant data to	
	scuss the computational efficiency of the principal algorithm		
Text Bool	k: Data Structures using C. 2 <sup>nd</sup> edition, Reema Thareja, Ox	ford	c scarcing
1.	Definition	loru.	
2.	Classification Of Data Structures		
3.	Operations Of Data Structures	1	
4.	Abstract Data Type (Adt)		
5.	Preliminaries Of Algorithms		
6.	Time And Space Complexity	From:	
7.	Linear Search	15-05-2021	Online Classes
8.	Binary Search	To:	With Ms Teams
9.	Fibonacci Search	12-06-2021	with wis reams
10.	Insertion Sort	12-00-2021	
11.	Selection Sort		
12.	Bubble Sort		
13.	Quick Sort Radix Sort		
14. 15.	Merge Sort		
	LINKED LIST		
	e arrays, records, linked structures, stacks, queues, trees, an k: Data Structures using C. 2 <sup>nd</sup> edition, Reema Thareja, Ox Introduction		
17.	Single Linked List		
18.	Representation Of Linked List In Memory	-	
19.	Operations On Single Linked List – Insertion, Deletion, Search, And Traversal	From:	
20.	Reversing Single Linked List	14-06-2021	Online Classes
21.	Applications On Single Linked List – Polynomial Expression Representation	To:	With Ms Teams
22.	Addition And Multiplication	22-06-2021	
23.	Sparse Matrix Representation Using Linked List		
24.	Advantages And Disadvantages Of Single Linked List		
25.	Double Linked List – Insertion, Deletion		
26.	Circular Linked List – Insertion, Deletion		
UNIT -3:	QUEUES, STACKS		
	arrays, records, linked structures, stacks, queues, trees, and	d graphs in wri	ting programs
	c: Data Structures using C. 2 <sup>nd</sup> edition, Reema Thareja, Oxf		ang programs
27.	Introduction To Queues		
28.	Representation Of Queues – Using Arrays And Using Linked List		
29.	Implantation Of Queues – Using Arrays And Using		

	Linked list		
30.	Application of Queues-Circular Queues, Deques		
31.	Priority Queues		
32.	Multiple Queues		
33.	Introduction to Stacks	From:	Online Classes
34.	Array Representation of Stacks	23.06.2021	With Ms Teams
35.	Operations on Stacks	To:	
36.	Linked list Representation of Stacks	03.07.2021	
37.	Operations on Linked Stack		
38.	Applications-Reversing list, Factorial Calculation		
39.	Infix to Postfix Conversion		
40.	Evaluating Postfix Expressions		

#### UNIT - 4: TREES

CO4: Demonstrate different methods for traversing trees

Text Book: Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.

No. of Periods	TOPIC	DATE	Mode of Delivery
41.	Basic Terminology in Trees		
42.	Binary Trees-Properties		
43.	Representation of Binary Trees using Arrays and Linked lists		
44.	Binary Search Trees- Basic Concepts	From: 05.07.2021	Online Classes
45.	BST Operations: Insertion, Deletion, Tree Traversals	To:	With Ms Teams
46.	Applications-Expression Trees	24.07.2021	
47.	Heap Sort		
48.	Balanced Binary Trees-AVL Trees, Insertion		
49.	Deletion and Rotations		

#### **UNIT - 5: GRAPHS**

CO4: Demonstrate different methods for traversing trees

Text Book: Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.

Basic Concepts		
Representations of Graphs-Adjacency Matrix and		
using Linked list		
Graph Traversals (BFT & DFT)	From:	
Applications- Minimum Spanning Tree Using Prims	26.07.2021	Online Classes
Algorithm	То:	With Ms Teams
Minimum Spanning Tree Using Kruskals Algorithm	09.08.2021	
Dijkstra's shortest path		
Transitive closure		
Warshall's Algorithm		
e Faculty Sign	dmaf ature of the I	HOD
	Representations of Graphs-Adjacency Matrix and using Linked list Graph Traversals (BFT & DFT) Applications- Minimum Spanning Tree Using Prims Algorithm Minimum Spanning Tree Using Kruskals Algorithm Dijkstra's shortest path Transitive closure Warshall's Algorithm	Representations of Graphs-Adjacency Matrix and using Linked list  Graph Traversals (BFT & DFT)  Applications- Minimum Spanning Tree Using Prims Algorithm  Minimum Spanning Tree Using Kruskals Algorithm  Dijkstra's shortest path  Transitive closure  Warshall's Algorithm

PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108 TENTATIVE LESSON PLAN: R201218

	itle : DATA STRUCTURES		
Section			
Revision	No: 00   Prepared By: Dr D. HARITHA	Approved 1	By: HOD
	S TEAMS, PPTs		
No. of	TOPIC	Date	Mode of
Periods			Delivery
UNIT-1:	DATA STRUCTURES, SEARCHING, SORTING		
CO-1: Su	mmarize the properties, interfaces, and behaviours of	basic abstract data ty	pes
Text Roo	scuss the computational efficiency of the principal alg k: Data Structures using C. 2 <sup>nd</sup> edition, Reema Tharej	gorithms for sorting &	& searching
1.	Definition Definition	a, Oxford.	
2.	Classification Of Data Structures		
3.	Operations Of Data Structures		
4.	Abstract Data Type (Adt)		
5.	Preliminaries Of Algorithms		
6.	Time And Space Complexity		
7.	Linear Search	From:	
8.	Binary Search	15-05-2021	Online Classes
9.	Fibonacci Search	To:	With Ms Teams
10.	Insertion Sort	12-06-2021	
11.	Selection Sort		
12.	Bubble Sort		
13.	Quick Sort		
14.	Radix Sort		
15.	Merge Sort LINKED LIST		
Text Boo	e arrays, records, linked structures, stacks, queues, tree k: Data Structures using C. 2 <sup>nd</sup> edition, Reema Tharej	es, and graphs in wri ja, Oxford.	ting programs
16.	Introduction		
17.	Single Linked List		
18.	Representation Of Linked List In Memory		
19.	Operations On Single Linked List – Insertion, Delet Search, And Traversal		ķ.
20.	Reversing Single Linked List	From:	
21.	Applications On Single Linked List – Polynomial Expression Representation	To:	Online Classes With Ms Teams
22.	Addition And Multiplication	22-06-2021	
23.	Sparse Matrix Representation Using Linked List		
24.	Advantages And Disadvantages Of Single Linked L	List	
25.	Double Linked List – Insertion, Deletion		
26.	Circular Linked List – Insertion, Deletion		
UNIT -3:	QUEUES, STACKS		
CO3: Use	arrays, records, linked structures, stacks, queues, trees	s, and graphs in writ	ing programs
Text Book	: Data Structures using C. 2 <sup>nd</sup> edition, Reema Thareja	, Oxford.	6 b 2 · · · · · ·
27.	Introduction To Queues		
28.	Representation Of Queues – Using Arrays And Usin Linked List	ng	
29.	Implantation Of Queues – Using Arrays And Using		

	Linked list		
30.	Application of Queues-Circular Queues, Deques		
31.	Priority Queues		
32.	Multiple Queues		
33.	Introduction to Stacks	From:	Online Classes
34.	Array Representation of Stacks	23.06.2021	With Ms Teams
35.	Operations on Stacks	To:	
36.	Linked list Representation of Stacks	03.07.2021	
37.	Operations on Linked Stack		
38.	Applications-Reversing list, Factorial Calculation	7	
39.	Infix to Postfix Conversion		
40.	Evaluating Postfix Expressions		

#### UNIT - 4: TREES

CO4: Demonstrate different methods for traversing trees

Text Book: Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.

No. of Periods	TOPIC	DATE	Mode of Delivery
41.	Basic Terminology in Trees		
42.	Binary Trees-Properties		
43.	Representation of Binary Trees using Arrays and Linked lists	_	
44.	Binary Search Trees- Basic Concepts	From: 05.07.2021	Online Classes
45.	BST Operations: Insertion, Deletion, Tree Traversals	To:	With Ms Teams
46.	Applications-Expression Trees	24.07.2021	with was reams
47.	Heap Sort		
48.	Balanced Binary Trees-AVL Trees, Insertion		
49.	Deletion and Rotations		

#### UNIT - 5: GRAPHS

CO4: Demonstrate different methods for traversing trees

Text Book: Data Structures Using C. 2nd Edition, Reema Thareja, Oxford.

50.	Basic Concepts		
51.	Representations of Graphs-Adjacency Matrix and using Linked list		
52.	Graph Traversals (BFT & DFT)	From:	
53.	Applications- Minimum Spanning Tree Using Prims Algorithm	26.07.2021 <b>To:</b>	Online Classes With Ms Teams
54.	Minimum Spanning Tree Using Kruskals Algorithm	09.08.2021	With this Teams
55.	Dijkstra's shortest path		
56.	Transitive closure		
57.	Warshall's Algorithm		

Signature of the Faculty

Signature of the HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

## TENTATIVE LESSON PLAN: R201225 PYTHON PROGRAMMING

	Title: PYTHON PROGRAMMING (R201225) : CSE-A Date: 06/05/2021	Page No: 01	of 03
	n No: 00 Prepared By: M.V.SUMANTH	Approved By	
	Black board, PPTs, Moodle	Approved by	· HOD
No. of Periods	TOPIC	Date	Mode o
UNIT-			
_	To learn about the conceptual introduction, data t mming. undamentals of Python First Programs, Kenneth. A. Lambert, (		in pyth
1	Conceptual introduction: topics in computer science, algorithms;	lagaga	
2	modern computer systems: hardware architecture,		
3	data representation in computers, software and operating system;	From:	
4	installing Python; basic syntax, interactive shell	11/05/2021	
5	editing, saving, and running a script.		Online
6	The concept of data types; variables, assignments;	To:	
7	immutable variables; numerical types; arithmetic operators and expressions;	26/05/2021	
8	comments in the program, understanding error messages;		
9	Tutorial		
python.	To gain knowledge on Control statements, String Manipulat undamentals of Python First Programs, Kenneth. A. Lamber		er system
11	Conditions, boolean logic, logical operators; Ranges, Control statements: if-else, loops (for, while);		
12	short-circuit (lazy) evaluation,		
13	Strings and text files; manipulating files and directories, os and sys modules;		
14	text files: reading/writing text.		
15	numbers from/to a file	From:	
16	Creating and reading a formatted file (csv or tab-separated).		
17	String manipulations: subscript operator,	27/05/2021	Online
18	indexing,	To: 14/6/2021	Online
19	slicing a string		
20	;strings and number system:		

21	Converting strings to numbers and vice versa.		
22	Binary, octal, hexadecimal numbers.		
23	Tutorial		
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III	Lists, Dictionaries and Functions.		
CO3: To	learn about Lists, Dictionaries, Defining Functions and Module	s. To learn abo	out their
usage.			
	ndamentals of Python First Programs, Kenneth. A. Lambert, Co	engage.	1
24	Lists, tuples, and dictionaries: basic list operators,		
25	Lists, tuples, and dictionaries, basic list operators	-	
26	replacing, inserting, removing an element;	From:	
27	searching and sorting lists; dictionary literals, adding and	15/06/2021	
20	removing keys,	T	
28	accessing and replacing values; traversing dictionaries.	To:	Ouline
29	Design with functions: hiding redundancy, complexity;	30/06/2021	Online
30	arguments and return values;,		
31	formal vs actual arguments		
32	named arguments, Program structure and design, Recursive		
32			
32	functions.		
33 UNIT-IV CO4: To	Tutorial  File Operations assimilate about File operations, Object Oriented Programming		
33 UNIT-IV CO4: To TB1: Fui	Tutorial  File Operations		
33 UNIT-IV CO4: To TB1: Fur No. of Periods	Tutorial  File Operations assimilate about File operations, Object Oriented Programmin and Amentals of Python First Programs, Kenneth. A. Lambert, Co	engage.	
33 UNIT-IV CO4: To TB1: Fui No. of Periods 34	Tutorial  File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control TOPIC  File Operations: Reading config files in python,	engage.	Mode of Delivery
33 UNIT-IV CO4: To TB1: Fun No. of Periods 34 35	Tutorial  File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control TOPIC  File Operations: Reading config files in python, Writing log files in python,	engage.	
33 UNIT-IV CO4: To TB1: Fun No. of Periods 34	Tutorial  File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Co TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and	Date	
33 UNIT-IV CO4: To TB1: Fui No. of Periods 34 35 36	Tutorial  File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(),	Date From:	
33 UNIT-IV CO4: To TB1: Fui No. of Periods 34 35 36	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and Amentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(),	Date	
33 UNIT-IV CO4: To TB1: Fui No. of Periods 34 35 36	File Operations assimilate about File operations, Object Oriented Programming and Amentals of Python First Programs, Kenneth. A. Lambert, Control TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file	Prom: 01/07/2021	
33 UNIT-IV CO4: To TB1: Fui No. of Periods 34 35 36 37 38	Tutorial  File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations	From: 01/07/2021 To:	
33 UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36 37 38	Tutorial  File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods;	Prom: 01/07/2021	Delivery
33 UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36 37 38 39 40	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and Amentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes,	From: 01/07/2021 To:	Delivery
33 UNIT-IV CO4: To TB1: Fui No. of Periods 34 35 36 37 38 39 40 41	File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects	From: 01/07/2021 To:	Delivery
33 UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36 37 38 39 40 41 42	File Operations assimilate about File operations, Object Oriented Programming and amentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations  Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial	From: 01/07/2021 To:	Delivery
33 UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V	File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial Graphical User Interface, Introduction to HTML	From: 01/07/2021 To: 22/07/2021	Delivery
33 UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To	File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User In	From: 01/07/2021 To: 22/07/2021	Delivery
33 UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To	File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial Graphical User Interface, Introduction to HTML	From: 01/07/2021 To: 22/07/2021	Delivery
33 UNIT-IV CO4: To TB1: Fui No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To TB1: Fui	Tutorial  File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial  Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User Indamentals of Python First Programs, Kenneth. A. Lambert, Co	From: 01/07/2021 To: 22/07/2021	Delivery
33 UNIT-IV CO4: To TB1: Fui No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To TB1: Fui	File Operations assimilate about File operations, Object Oriented Programming adamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial  Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User Indamentals of Python First Programs, Kenneth. A. Lambert, Control	From: 01/07/2021 To: 22/07/2021	Delivery

	paradigm; tkinter module,		
46	creating simple GUI; buttons, labels, entry fields, dialogs;	From:	
47	widget attributes - sizes, fonts, colors layouts, nested frames		Online
48	Multithreading, Networks,	23/07/2021	
49	Client/Server Programming;		
50	introduction to HTML	To:	
51	interacting with remote HTML server,	14/08/2021	
52	running html-based queries, downloading pages;	11/00/2021	
53	CGI programming, programming a simple CGI form.		
54	Tutorial		

Signature of Faculty

Signature of HOD

PRINCIPAL

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

### TENTATIVE LESSON PLAN: R201225 PYTHON PROGRAMMING

	Title: PYTHON PROGRAMMING (R201225)		
	: CSE-B Date: 06/05/2021	Page No: 01	
	No: 00 Prepared By: M.V.SUMANTH	Approved By	: HOD
Tools: I	Black board, PPTs, Moodle		
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I			
	To learn about the program development cycle, Data type	es, Decision st	ructures and
	on structures in python programming.		
1 1 1	Introduction to Python, Program Development Cycle, Input,	engage.	Γ
1			
	Processing, and Output,		
2	Displaying Output with the Print Function, Comments, Variables,		
3	Reading Input from the Keyboard, Performing Calculations,	From:	
4	Operators. Type conversions, Expressions, More about Data Output.		Online
5	Data Types, and Expression: Strings Assignment, and Comment,	10/05/2021 To:	
6	Numeric Data Types and Character Sets, Using functions and Modules.	30/05/2021	
7	Decision Structures and Boolean Logic: if, if-else, if-elif-else Statements, Nested Decision Structures,		
8	Comparing Strings, Logical Operators, Boolean Variables.		
9	Repetition Structures: Introduction, while loop, for loop, Calculating a Running Total,		
10	Input Validation Loops, Nested Loops.		
11	Tutorial	4	
	Selection, Iterations, String Methods ogain knowledge on formatted output, String Methods and Fundamentals of Python First Programs, Kenneth. A. Lambert	0	python.
12	Control Statement: Definite iteration for Loop		
13	Formatting Text for output,		
14	Selection if and if else		

21	Converting strings to numbers and vice versa.		
22	Binary, octal, hexadecimal numbers.		
23	Tutorial		
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III			
usage.	learn about Lists, Dictionaries, Defining Functions and Module adamentals of Python First Programs, Kenneth. A. Lambert, Ce		out their
24	Lists, tuples, and dictionaries: basic list operators,		
25	Lists, tuples, and dictionaries, basic list operators		
26	replacing, inserting, removing an element;	From:	
27	searching and sorting lists; dictionary literals, adding and removing keys,	15/06/2021	
28	accessing and replacing values; traversing dictionaries.	To:	
29	Design with functions: hiding redundancy, complexity;	30/06/2021	Online
30	arguments and return values;,		
31	formal vs actual arguments		
32	named arguments, Program structure and design, Recursive		
	functions		Tally Street
	에서 어린다. [18] : C. (18] (18] : 프린터 (18] (18] (18] (18] (18] (18] (18] (18]	g concepts.	
UNIT-IV CO4: To TB1: Fur No. of	Tutorial		
UNIT-IV CO4: To TB1: Fur No. of Periods	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and amentals of Python First Programs, Kenneth. A. Lambert, Co	engage.	
UNIT-IV CO4: To TB1: Fur No. of Periods	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and amentals of Python First Programs, Kenneth. A. Lambert, Co TOPIC  File Operations: Reading config files in python,	engage.	
UNIT-IV CO4: To TB1: Fur No. of Periods	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and amentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and	Date	
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and amentals of Python First Programs, Kenneth. A. Lambert, Co TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(),	Date From:	
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file	Prom: 01/07/2021	Mode of Delivery
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and Indamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations	Prom: 01/07/2021 To:	
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and Managementals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods;	Prom: 01/07/2021	Delivery
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36 37 38	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes,	Prom: 01/07/2021 To:	Delivery
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36 37 38 39 40 41	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects	Prom: 01/07/2021 To:	Delivery
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V	File Operations assimilate about File operations, Object Oriented Programming and amentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial Graphical User Interface, Introduction to HTML	From: 01/07/2021 To: 22/07/2021	Delivery
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To	File Operations assimilate about File operations, Object Oriented Programming and amentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User Interface	From: 01/07/2021 To: 22/07/2021	Delivery
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To	File Operations assimilate about File operations, Object Oriented Programming assimilate about File operations, Object Oriented Programming assimilate about File operations, Kenneth. A. Lambert, Continued: TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User Indamentals of Python First Programs, Kenneth. A. Lambert, Co	From: 01/07/2021 To: 22/07/2021	Delivery
UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To TB1: Fun	Tutorial  File Operations assimilate about File operations, Object Oriented Programming assimilate about File operations, Object Oriented Programming assimilate about File operations, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial  Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User Indamentals of Python First Programs, Kenneth. A. Lambert, Control	From: 01/07/2021 To: 22/07/2021	Delivery

	paradigm; tkinter module,		
46	creating simple GUI; buttons, labels, entry fields, dialogs;		
47	widget attributes - sizes, fonts, colors layouts, nested frames	From:	
48	Multithreading, Networks,	23/07/2021	Online
49	Client/Server Programming;		
50	introduction to HTML	To:	
51	interacting with remote HTML server,	14/08/2021	
52	running html-based queries, downloading pages;		
53	CGI programming, programming a simple CGI form.		
54	Tutorial		

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

## TENTATIVE LESSON PLAN: R201201

Section : IT	Date: 10-05-2021	Page No	: 01 of 02
Revision No: 0	Prepared By: K.BASAVARAJI		ed By : HOD
Tools: Black bo	ard, PPT'S, MS Teams		
No. of Periods	TOPIC	Date	Mode of
			Delivery
VECTORS CO1: solve syste Seidel (L3)	G SYSTEM OF LINEAR EQUATIONS, Each of linear algebraic equations using Gaung Mathematics", Dr. T.K.V.Iyengar; S.	uss elimination, Gauss J	
1	Introduction to matrices		
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		
5	PAQ form problems		
6	Homogeneous system AX=0		1
7	Non Homogeneous system AX=B		Lecture interspersed with discussions
8	Problems on rank method	From:	
9	Gauss Elimination method	10-05-2021	
10	Eigen values – definition	To:	
11	Properties of Eigen values	29-05-2021	
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
CO2: Develop tl applications (L6		needed by engineers for	r practical
	Caley Hamilton theorem, verification, proble		
15	Mathematics", Dr. T.K.V.Iyengar; S.C. Caley Hamilton theorem, verification, proble		

16	Finding inverse and power of a matrix by caley  Hamilton theorem	to at the control of	and the second second
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	31-05-2021	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	12-06-2021	
22	Orthogonal reduction method	12-00-2021	
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		

#### **UNIT-III: UNIT – III: ITERATIVE METHODS:**

CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)

TB: "Engineering Mathematics", Dr. T.K.V. Iyengar; S. Chand publications

26	Introduction	From:	
		From.	
27	Method – 1: Bisection method		
28	Problems	14-06-2021	
30	Method – 2: Regula falsi method		
31	Problems	To:	
33	Method – 3: Iteration method		
34	Problems	19-06-2021	Lecture
35	Method – 4: Newton Raphson method	_ &	interspersed
36	Problems	From:	with
37	Newton Raphson method simultaneous equations	20.06.2021	discussions
38	Gauss Jacobi Method	28-06-2021	
39	Gauss Seidal Method	То:	
40	problems	07-07-2021	

#### **UNIT – IV: INTERPOLATION**

CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

41	Introduction: Forward and Backward Differences	

42	Newton's Forward interpolation formula	Service of the servic	Property of the Contract of th
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems		interspersed
47	Problems	08-07-2021	with discussions
48	Gauss Backward interpolation formula – Problems	То:	uiscussions
49	Problems	24-07-2021	
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		

## UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION

CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)

TB: "Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications

53	Trapezoidal rule		
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		
57	Taylor's series method	From:	Lecture interspersed
58	Problems	26-07-2021.	with discussions
59	Picard's method of successive approximation	To:	discussions
60	Euler's method	07-08-2021	
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

M.Bw. Vegresy Signature of Faculty Signature of HOD

PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

## TENTATIVE PLAN: R201218

Course Title: DAT	A STRUCTURES	
Section: IT	Date: 21/5/2021	Page No: 1 to 6
Revision No: 00	Prepared By: Y.V.Nandini	Approved By: HOD

Tools: PPTs,MS TEAMS.

S. No.	. Topic	Date	Mode of Delivery
CO2: Disc	Data Structures, Searching, Sorting marize the properties, interfaces, and behaviors of basic about the computational efficiency of the principal algorithms	stract data types s for sorting & search	ning
TB1: Data	Structures Using C. 2nd Edition.Reema Thareja, Oxford		
1	Data Structures Introduction		
2	Definition, Classification of Data Structures		
3	Operations on Data Structures		
	Abstract Data Type (ADT), Preliminaries of		Online
4	algorithms		
5	Time complexity		
6	Space complexity		
7	Searching Introduction		
8	Linear search	From:	
9	Binary search	11/05/2021	
10	Fibonacci search	To: 26/05/2021	
11	Insertion sort		
12	Selection sort		
13	Exchange (Bubble sort		
14	Quick sort		
15	Radix sort		
16	Merging (Merge sort)		

B1: Data Str	ructures Using C. 2nd Edition.Reema Thareja, Oxford		
17	Linked List: Introduction		
18	Single linked list,		
19	Representation of Linked list in memory		
20	Operations on Single Linked list-Insertion, Deletion		
21	Applications on Single Linked list: Sparse Matrix Representation	From: 27/05/2021	
22	Advantages and Disadvantages of Single Linked list	To:	
23	Double Linked list-Insertion, Deletion	14/6/2021	Online
24	Circular Linked list-Insertion, Deletion		
25	Differences between SINGLE LINKED LIST AND DOUBLE LINKED LIST		
26	Difference between LINKED LIST AND ARRAYS		
27	Polynomial Expression Representation		
CO3: Use ar	TEUES AND STACKS rays, records, linked structures, stacks, queues, trees, and ructures Using C. 2nd Edition.Reema Thareja, Oxford	Graphs in writing p	orograms
30	Introduction to Queues, Representation of Queues using Arrays, Application of Queues		
31	Representation of Queues using Linked list		
32	Circular Queues		
33	Advantages and disadvantages of queues. Deques		
34	Priority Queues		

\_

36	Introduction to Stacks, STACKS ADVANTAGES		
30	,PROPERTIES AND DISADVANTAGES.		
		From:	
27	Array Representation of Stacks	15/06/2021	
37		T.	
		To: 30/06/2021	Online
	Linked list Representation of Stacks	30/00/2021	
	working.Applications-Reversing list, Factorial		
38	Calculation		
	Culculation		
39	Infix to Postfix Conversion		
40	Evaluating Postfix Expressions.		
40			
41	Advantages and applications of Infix to Postfix		
	Advantages and applications of Infix to Postfix,		
42	ADVANTAGES AND DISADVANTAGES		
43	Applications of QUEUES and STACKS		
NIT-IV Tre	ees	nd Graphs in writing p	rograms
NIT-IV Tre	ees ays, records, linked structures, stacks, queues, trees, an	nd Graphs in writing p	orograms
NIT-IV Tre	ees		programs
NIT-IV Tre	ees  ays, records, linked structures, stacks, queues, trees, an strate different methods for traversing trees		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str	ees  ays, records, linked structures, stacks, queues, trees, an strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle		programs
NIT-IV Tre	ees  ays, records, linked structures, stacks, queues, trees, an strate different methods for traversing trees		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str	ays, records, linked structures, stacks, queues, trees, an strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str	ees  ays, records, linked structures, stacks, queues, trees, an strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str	ays, records, linked structures, stacks, queues, trees, an strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str	ees  ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str 44	ees  ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str 44	ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES  Binary Trees Introduction		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str 44	ees  ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str 44 45 46	ees  ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES  Binary Trees Introduction  Differences between Trees and Binary Trees		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str 44 45	ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES  Binary Trees Introduction		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str 44 45 46	ees  ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES  Binary Trees Introduction  Differences between Trees and Binary Trees		programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str 44 45 46 47 48	ees ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES  Binary Trees Introduction  Differences between Trees and Binary Trees  Binary Trees-Properties  Representation of Binary Trees using Arrays	en Weiss.	programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str  44  45  46  47  48  49	ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES  Binary Trees Introduction  Differences between Trees and Binary Trees  Binary Trees-Properties	en Weiss.	programs
NIT-IV Tre CO3: Use arra CO4: Demons CB2: Data Str 44 45 46 47 48	ees ays, records, linked structures, stacks, queues, trees, and strate different methods for traversing trees ructures and algorithm analysis in C, 2nded, Mark Alle  Trees Introduction, Terminology in Trees  Trees: Basic, Examples of TREES  Binary Trees Introduction  Differences between Trees and Binary Trees  Binary Trees-Properties  Representation of Binary Trees using Arrays	en Weiss.	programs

Differences between Trees and Binary Trees and

52

	Binary Search Trees		
53	Basic Concepts, BST Operations	From: 01/07/2021	Online
54	BST Operations: Insertion, Deletion	01/07/2021	
55	Tree Traversals: Inorder	To: 22/07/2021	
56	Tree Traversals: Preorder		
57	Tree Traversals: Postorder		
58	Applications of Tree Traversals		
59	Expression Trees		
60	Heap sort		
61	Balanced Binary Trees- AVL Trees		
62	AVL Trees		
63	Balanced Binary Trees Insertion, Deletion, Rotations		

### **UNIT-V** Graphs

CO3: Use arrays, records, linked structures, stacks, queues, trees, and Graphs in writing programs TB2: Data Structures and algorithm analysis in C, 2nded, Mark Allen Weiss.

64	Graphs: Basic Concepts		
65	Representations of Graphs-Adjacency Matrix		
66	Representations of Graphs using Linked list		
67	BFT		
68	DFT	From: 23/07/2021	Online
69	Minimum Spanning Tree	To:	
70	Minimum Spanning Tree Using Prims	14/08/2021	
71	Minimum Spanning Tree Using Kruskals Algorithm		
72	Dijkstra's shortest path		
73	Transitive closure		

74	Warshall's Algorithm	

TB:

- 1) Data Structures Using C. 2nd Edition.Reema Thareja, Oxford.
- 2) Data Structures and algorithm analysis in C, 2nded, Mark Allen Weiss.

Signature of the Faculty

Signature of HOD

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

## TENTATIVELESSON PLAN: R201215

	AFFLI	ED CHEMISTRY Date:11-05-2021	Page No	:1-3
Section: IT	00	Prepared By: G.L.SARVANI		ed By : HOD
Revision No:			Approv	cu by . Hob
Tools: PPTS, No. of Period		TOPIC	Date	Mode of
No. of Period	s:	Torre	Dute	Delivery
2		Unit – I: POLYMER TECHNOLO	nev	
				Col
(	Enginee	ring Chemistry by Jain and Jain; Dhanpat R	d composites	(ERP) in
		sage of plastics in household appliances ar	id composites	(1 Kt ) III
aerospace and		otive industries.		
1		merization:- Introduction-methods of		
		merization		
2		ical and mechanical properties.	From:	
3		ics: Compounding-fabrication	11-5-21	
4		aration, properties and applications of PVC,		
5		carbonates and Bakelite-mention some	To:	
		nples of plastic.	25-5-21	Taatuma
6		erials used in electronic gadgets, recycling of		Lecture
		astic waste		interspersed with
7	100000000000000000000000000000000000000	omers:- Natural rubber-drawbacks-		discussions
<u></u>		anization		uiscussions
8		aration, properties and applications of		
0		hetic rubbers		
9		a S, thiokol and polyurethanes	+	
10		posite materials: Fiber reinforced plastics	+	
11	cond	ductingpolymers-		
10	Diad	egradable polymers biopolymers		
12		nedical polymers		
13	BIOII	ledical polymers		
			CORROCION	•
	Unit -	II :ELECTROCHEMICAL CELLS AND	CORROSION	
	(Engine	ering Chemistry by Jain and Jain; Dhanpat F	Rai Publicating	(Co.)
co2: Outli	ne the b	asics for the construction of electrochemic	alcells, batter	ies and fuelcells
J	Understa	and the mechanism of corrosion and how	it can be prev	ented
1		Unit -II :ELECTROCHEMICAL CELLS	From:	
2		le electrode potentia.	26-5-21	
3		trochemical series and uses of series	To.	
4		dard hydrogen electrode, calomel electrode	To:	Lastuma
5		centration cell-	15-6-21	Lecture
6		struction of glass electrode		interspersed with
7		eries: Dry cell, Ni-Cd cells,		discussions
8	- ALEXANDER STREET	etal hydride cells, Li ion battery, zinc air cells		uiscussions
9	Fuel	cells: H2-O2, CH3OH-O2,		

10	phosphoric acid FUEL CELL	and the state of t
	Molten carbonate fuel cell	
11	Corrosion:-Definition-theories of corrosion	
12	galvanic corrosion, differential aeration corrosion, stress corrosion,	
13	waterline corrosion-passivity of metals- galvanicseries	
14	Factors influencing rate of corrosion-corrosion control	
15	Protective coatings: Surface preparation, cathodic	
16	Anodic coatings, electroplating, electroless plating (nickel).	
17	Paints (constituents, functions, special paints).	

#### **UNIT III: MATERIAL CHEMISTRY**

(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)

**CO3:** Explain the preparation of semiconductors and nanomaterials, engineering applications of nanomaterials, superconductors and liquiderystals.

1	Part I: Non-elemental semiconducting materials	From: 166-21	
2	Semiconductor devices (p-n junction diode as rectifier, junction transistor	To:	
3	Insulators & magnetic materials: electrical insulators	20-6-21	
4	Ferro and ferri magnetism-Hall effect and its applications.		Lecture
5	Part II: Nano materials:- Introduction-sol-gel method-		interspersed with
6	characterization by BET, SEM and TEM methods		discussions
7	Applications of graphene-carbon nanotubes and fullerenes:	From: 28-6-21	
8	Types, preparation and applications Liquid crystals	To:	
9	Introduction-types-applications. Super conductors:-Type –I, Type II-characteristics and applications.	7-7-21	

# UNIT IV: SPECTROSCOPIC TECHNIQUES & NON CONVENTIONAL ENERGY SOURCES

(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)

**CO4:** Recall the increase in demand for power and hence alternative sources of power are studied due to depleting sources of fossil fuels. Advanced instrumental techniques are introduced.

1	Part A: SPECTROSCOPIC TECHNIQUES	
	Electromagnetic spectrum-UV	
2.	laws of absorption, instrumentation,	

3.3.4	Theory of electronic spectroscopy, Frank-condon principle	AND PROPERTY STATES	HANGE COLUMN
4.	chromophores and auxochromes, intensity shifts, applications		Lecture
5.	FT-IR (instrumentation and IR of some organic compounds, applications).	From: 08-7- 21	interspersed with
6.	Magnetic resonance imaging and CT scan (procedure & applications).	To:	discussions
7.	Part B: NON CONVENTIONAL ENERGY SOURCES	26-7-21	
8.	Design, working, schematic diagram, advantages and disadvantages of photovoltaic cell,		
9	hydropower, geothermal power,		
10	Tidal and wave power		

## UNIT V: ADVANCED CONCEPTS/TOPICS IN CHEMISTRY

(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.) **C05**: Outline the basics of computational chemistry and molecular switches.

1.	Computational chemistry: Introduction, Ab Initio studies Molecular switches		
2.	characteristics of molecular motors and machines, Rotaxanes	From: 28-7-	Lecture
3	Catenanes as artificial molecular machines, prototypes	21	interspersed with
4.	linear motions in rotaxanes, an acid-base controlled molecular shuttle	To: 07-8-21	discussions
5.	a molecular elevator,		
	an autonomous light-powered molecular motor		
7.	Computational chemistry: Introduction, Ab Initio studies Molecular switches		
8.	characteristics of molecular motors and machines,		

& Inap HOD SIGNATURE

te of Technology ENIKEPADU, VIJAYAWADA-521 108

### TENTATIVE LESSON PLAN: R201216 COMPUTER ORGANIZATION

Section : IT	Date: 17/05/2021	Page No:	1 to 4
Revision No	Prepared By: B.S.S T	ejesh Approved	By: HOD
Tools: MS To	eams, Black board, PPTs		
S.NO.	TOPIC	Date	Mode of
UNIT I Digit	al Computers and Data Representation		Delivery
	trate and understanding of the design of the fun	ctional units of a digital compu	iter system.
CO2: Relate P	ostulates of Boolean algebra and minimize com	abinational functions	
	ze and manipulate representations of numbers s		
	Design, 5/e, Morris Mano, Michael D Cile Introduction	eui, PEA	T
1.			
2.	Numbering Systems		
3.	Decimal to Binary Conversion		
4.	Binary Coded Decimal Numbers		
5.	Weighted Codes		-
6.	Self-Complementing Codes		
7.	Cyclic Codes		
8.	Error Detecting Codes		
9.	Error Correcting Codes		
10.	Hamming Code for Error Correction	From:	T
11.	Alphanumeric Codes	10.05.2021	Lecture intersperse
12.	ASCI Code		with
13.	Data Representation: Data types	T 26 05 202	discussion
14.	Complements	To: 26.05.202	1
15.	Fixed Point Representation		
16.	Floating Point Representation		
17.	Boolean Algebra :Theorems and prope	erties	
18.	Boolean functions	1	
19.	Canonical and standard forms		
	Minimization of Boolean functions usi	ng	
20.	algebraic identities		
	Karnaugh map representation and mini	imization	
21.	using two and three variable Maps		
22.	Logical gates		

23.	Universal gates		
	Two-level realizations using gates: AND-OR,		
24.	OR-AND, NAND-NAND and NOR-NOR		
	structures		
UNIT-II	Digital logic circuits		
	he logic families and realization of logic gates.		
	and analyze combinational and sequential circuits		
	Design, 5/e, Morris Mano, Michael D Ciletti, PEA  Combinatorial Circuit Design Procedure		
25.			
26.	Implementation using universal gates		
27.	Multi-bit adder	From:	
28.	Multiplexers	27.05.2021	Lecture
29.	Decoders		interspersed
30.	Sequential Switching Circuits		with
31.	Latches and Flip-Flops	To:	discussions
32.	Ripple counters using T flip-flops	12.06.2021	
33.	Synchronous counters		
34.	Shift Registers		
35	Ring counters		
UNIT-III	Computer Arithmetic		
	Computer Arithmetic the internal organization of computers, CPU, memory	unit and Input/C	Outputs and the
	Computer Arithmetic the internal organization of computers, CPU, memory ween its main components	unit and Input/C	Outputs and the
CO6: Recall relations betw	the internal organization of computers, CPU, memory		
CO6: Recall relations betw	the internal organization of computers, CPU, memory ween its main components		
CO6: Recall relations betw TB1: Digital	the internal organization of computers, CPU, memory ween its main components Logic and Computer Design, Moriss Mano, 11th Edition,		
CO6: Recall relations between TB1: Digital 36.	the internal organization of computers, CPU, memory ween its main components  Logic and Computer Design, Moriss Mano, 11th Edition,  Addition and subtraction		
CO6: Recall relations betw TB1: Digital 36.	the internal organization of computers, CPU, memory ween its main components  Logic and Computer Design, Moriss Mano, 11th Edition,  Addition and subtraction  Multiplication Algorithms		
CO6: Recall relations betw TB1: Digital 36. 37. 38.	the internal organization of computers, CPU, memory ween its main components  Logic and Computer Design, Moriss Mano, 11th Edition,  Addition and subtraction  Multiplication Algorithms  Booth multiplication algorithm		
CO6: Recall relations between TB1: Digital 36. 37. 38. 39. 40.	the internal organization of computers, CPU, memory ween its main components Logic and Computer Design, Moriss Mano, 11th Edition, Addition and subtraction Multiplication Algorithms Booth multiplication algorithm Division Algorithms Floating – point Arithmetic operations	PearsonEducati	
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39.	the internal organization of computers, CPU, memory ween its main components  Logic and Computer Design, Moriss Mano, 11th Edition,  Addition and subtraction  Multiplication Algorithms  Booth multiplication algorithm  Division Algorithms  Floating – point Arithmetic operations  Register Transfer language and microinstructions	PearsonEducati	
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39. 40. 41.	the internal organization of computers, CPU, memory ween its main components Logic and Computer Design, Moriss Mano, 11th Edition, Addition and subtraction Multiplication Algorithms Booth multiplication algorithm Division Algorithms Floating – point Arithmetic operations Register Transfer language and microinstructions :Bus memory transfer	PearsonEducati	
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39. 40. 41. 42.	the internal organization of computers, CPU, memory ween its main components  Logic and Computer Design, Moriss Mano, 11th Edition,  Addition and subtraction  Multiplication Algorithms  Booth multiplication algorithm  Division Algorithms  Floating – point Arithmetic operations  Register Transfer language and microinstructions :Bus memory transfer  Arithmetic and logical micro-operations	PearsonEducati	Lecture interspersed
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39. 40. 41.	the internal organization of computers, CPU, memory ween its main components  Logic and Computer Design, Moriss Mano, 11th Edition, Addition and subtraction  Multiplication Algorithms  Booth multiplication algorithm  Division Algorithms  Floating – point Arithmetic operations  Register Transfer language and microinstructions :Bus memory transfer  Arithmetic and logical micro-operations  Shift and rotate micro-operations	PearsonEducati From: 28.06.2021	Lecture interspersed with
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39. 40. 41. 42.	the internal organization of computers, CPU, memory ween its main components  Logic and Computer Design, Moriss Mano, 11th Edition,  Addition and subtraction  Multiplication Algorithms  Booth multiplication algorithm  Division Algorithms  Floating – point Arithmetic operations  Register Transfer language and microinstructions :Bus memory transfer  Arithmetic and logical micro-operations  Shift and rotate micro-operations  Basic Computer Organization and Design: Stored	PearsonEducati	Lecture interspersed with
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39. 40. 41. 42. 43. 44.	the internal organization of computers, CPU, memory ween its main components  Logic and Computer Design, Moriss Mano, 11th Edition, Addition and subtraction  Multiplication Algorithms  Booth multiplication algorithm  Division Algorithms  Floating – point Arithmetic operations  Register Transfer language and microinstructions :Bus memory transfer  Arithmetic and logical micro-operations  Shift and rotate micro-operations  Basic Computer Organization and Design: Stored program concept	From: 28.06.2021	Lecture interspersed with
CO6: Recall relations between TB1: Digital 36. 37. 38. 39. 40. 41. 42. 43. 44.	the internal organization of computers, CPU, memory ween its main components Logic and Computer Design, Moriss Mano, 11th Edition, Addition and subtraction Multiplication Algorithms Booth multiplication algorithm Division Algorithms Floating – point Arithmetic operations Register Transfer language and microinstructions :Bus memory transfer Arithmetic and logical micro-operations Shift and rotate micro-operations Basic Computer Organization and Design:Stored program concept Computer Registers	From: 28.06.2021	Lecture interspersed with
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46.	the internal organization of computers, CPU, memory ween its main components  Logic and Computer Design, Moriss Mano, 11th Edition,  Addition and subtraction  Multiplication Algorithms  Booth multiplication algorithm  Division Algorithms  Floating – point Arithmetic operations  Register Transfer language and microinstructions :Bus memory transfer  Arithmetic and logical micro-operations  Shift and rotate micro-operations  Basic Computer Organization and Design:Stored program concept  Computer Registers  Common bus system	From: 28.06.2021	Lecture interspersed with
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47.	the internal organization of computers, CPU, memory ween its main components Logic and Computer Design, Moriss Mano, 11th Edition, Addition and subtraction Multiplication Algorithms Booth multiplication algorithm Division Algorithms Floating – point Arithmetic operations Register Transfer language and microinstructions :Bus memory transfer Arithmetic and logical micro-operations Shift and rotate micro-operations Basic Computer Organization and Design:Stored program concept Computer Registers Common bus system Computer instructions	From: 28.06.2021	Lecture interspersed with
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48.	the internal organization of computers, CPU, memory ween its main components Logic and Computer Design, Moriss Mano, 11th Edition, Addition and subtraction Multiplication Algorithms Booth multiplication algorithm Division Algorithms Floating – point Arithmetic operations Register Transfer language and microinstructions :Bus memory transfer Arithmetic and logical micro-operations Shift and rotate micro-operations Basic Computer Organization and Design: Stored program concept Computer Registers Common bus system Computer instructions Timing and Control	From: 28.06.2021	Lecture interspersed with
CO6: Recall relations betw TB1: Digital 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47.	the internal organization of computers, CPU, memory ween its main components Logic and Computer Design, Moriss Mano, 11th Edition, Addition and subtraction Multiplication Algorithms Booth multiplication algorithm Division Algorithms Floating – point Arithmetic operations Register Transfer language and microinstructions :Bus memory transfer Arithmetic and logical micro-operations Shift and rotate micro-operations Basic Computer Organization and Design:Stored program concept Computer Registers Common bus system Computer instructions	From: 28.06.2021	Lecture interspersed

51.	Input-Output configuration and program Interrupt		
UNIT-IV	Micro Programmed Control		
	elementary problems by assembly language program		
TB1: Digital	Logic and Computer Design, Moriss Mano, 11th Edit	ion,PearsonEducation	
52.	Control memory		
53.	Address sequencing		
54.	Micro program example	From:	
55.	design of control unit	5.07.2021	
56.	Central Processing Unit		T
57.	General Register Organization	To: 24.07.2021	Lecture interspersed
58.	Instruction Formats		with
59.	Addressing modes		discussions
60.	Data Transfer and Manipulation		
(1	Program Control: Conditional Flags and		
61.	Branching		
UNIT-V M	emory Organization		
	the internal organization of computers, CPU, memo	ory unit and Input/Out	tputs and the
	veen its main components		
	elementary problems by assembly language program		
	Logic and Computer Design, Moriss Mano, 11th Edit	ion,PearsonEducation	<u>1</u>
62.	Memory Organization		
63.	Memory Hierarchy		
64.	Main Memory	From:	
65.	Auxiliary memory	26.07.2021	Lecture
66.	Associate Memory	20.07.2021	intersperse
67.	Cache Memory		with

62.	Memory Organization		
63.	Memory Hierarchy		
64.	Main Memory	Enome	
65.	Auxiliary memory	From: 26.07.2021	Lecture
66.	Associate Memory	20.07.2021	interspersed
67.	Cache Memory		with
	Input / Output Organization	To: 14.08.2021	discussions
68.	Input-Output Interface		
69.	Asynchronous data transfer		
70.	Modes of Transfer		
71.	Priority Interrupt Direct memory Access		

TB1: Digital Logic and Computer Design, Moriss Mano, 11th Edition, Pearson Education

TB2: Digital Design, 5/e, Morris Mano, Michael D Ciletti, PEA TB2: Digital Logic and Computer Design, M.Morris Mano, PEA.

Signature of Faculty

Signature of HOD

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

## TENTATIVE LESSON PLAN: R201225 PYTHON PROGRAMMING

Section	Fitle: PYTHON PROGRAMMING (R201225) : IT Date: 21/05/2021	Page No: 01	of 03
	No: 00 Prepared By: Amritha mishra	Approved By	: HOD
Tools: B	lack board, PPTs, MS Teams		
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I CO1: progran	To learn about the conceptual introduction, data ty		in pytho
1	Conceptual introduction: topics in computer science, algorithms;		
2	modern computer systems: hardware architecture,		
3	data representation in computers, software and operating system;	From:	
4	installing Python; basic syntax, interactive shell	11/05/2021	
5	editing, saving, and running a script.	To:	Online
6	The concept of data types; variables, assignments;	26/05/2021	
7	immutable variables; numerical types; arithmetic operators and expressions;		
8	comments in the program, understanding error messages;		
9	Tutorial		
python.	Selection, Iterations, String Methods o gain knowledge on Control statements, String Manipulat undamentals of Python First Programs, Kenneth. A. Lamber Conditions, boolean logic, logical operators; Ranges,		per system
11	Control statements: if-else, loops (for, while);		
12	short-circuit (lazy) evaluation,		
13	Strings and text files; manipulating files and directories, os and sys modules;		
	text files: reading/writing text.		
14			
14 15	numbers from/to a file	From:	
	numbers from/to a file  Creating and reading a formatted file (csv or tab-separated).	From:	
15		From: 27/05/2021	
15 16	Creating and reading a formatted file (csv or tab-separated).	27/05/2021	Online
15 16 17	Creating and reading a formatted file (csv or tab-separated).  String manipulations: subscript operator,		Online

21	Converting strings to numbers and vice versa.		
22	Binary, octal, hexadecimal numbers.		
23	Tutorial		
No. of Periods	TOPIC	Date	Mode of Delivery
usage.	learn about Lists, Dictionaries, Defining Functions and Module and		out their
25	Lists, tuples, and dictionaries, basic list operators		
26	replacing, inserting, removing an element;	From:	
27	searching and sorting lists; dictionary literals, adding and removing keys,	15/06/2021	
28	accessing and replacing values; traversing dictionaries.	To:	0.1
29	Design with functions: hiding redundancy, complexity;	30/06/2021	Online
30	arguments and return values;,		
31	formal vs actual arguments		
32	named arguments, Program structure and design, Recursive functions.		
	Tulletions.		
33 UNIT-IV CO4: To	Tutorial  File Operations assimilate about File operations, Object Oriented Programmin	g concepts.	
UNIT-IV CO4: To TB1: Fui No. of	Tutorial  File Operations	g concepts. engage. Date	The second secon
UNIT-IV CO4: To TB1: Fur No. of Periods	Tutorial  File Operations assimilate about File operations, Object Oriented Programmin ndamentals of Python First Programs, Kenneth. A. Lambert, Co	engage.	The state of the s
UNIT-IV CO4: To TB1: Fur No. of Periods	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and Amentals of Python First Programs, Kenneth. A. Lambert, Co TOPIC  File Operations: Reading config files in python,	engage.	The second secon
UNIT-IV CO4: To TB1: Fur No. of Periods	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and	Date	The state of the s
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(),	Date From:	The state of the s
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file	From: 01/07/2021	Mode of Delivery
UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and amentals of Python First Programs, Kenneth. A. Lambert, Control TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(),	From: 01/07/2021 To:	The second secon
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations	From: 01/07/2021	Delivery
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36 37 38	Tutorial  File Operations assimilate about File operations, Object Oriented Programming and Market and First Programs, Kenneth. A. Lambert, Control TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods;	From: 01/07/2021 To:	Delivery
UNIT-IV CO4: To TB1: Fur No. of Periods 34 35 36 37 38	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes,	From: 01/07/2021 To:	Delivery
UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To	File Operations assimilate about File operations, Object Oriented Programming and amentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User Interface	From: 01/07/2021  To: 22/07/2021	<b>Delivery</b> Online
UNIT-IV CO4: To TB1: Fui No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To TB1: Fui	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial  Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User Indamentals of Python First Programs, Kenneth. A. Lambert, Control	From: 01/07/2021  To: 22/07/2021	<b>Delivery</b> Online
UNIT-IV CO4: To TB1: Fun No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To	Tutorial  File Operations assimilate about File operations, Object Oriented Programming assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Continued: Indamentals of Python First Programs, Kenneth. A. Lambert, Continued: Indamentals of Python,  Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User Indamentals of Python First Programs, Kenneth. A. Lambert, Continued: inheritance, polymorphism, operator	From: 01/07/2021  To: 22/07/2021	<b>Delivery</b> Online
UNIT-IV CO4: To TB1: Fui No. of Periods 34 35 36 37 38 39 40 41 42 UNIT-V CO5: To TB1: Fui	Tutorial  File Operations assimilate about File operations, Object Oriented Programming Indamentals of Python First Programs, Kenneth. A. Lambert, Control  TOPIC  File Operations: Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations Classes and OOP: classes, objects, attributes and methods; defining classes; design with classes, data modeling; persistent storage of objects Tutorial  Graphical User Interface, Introduction to HTML assimilate about Inheritance, Polymorphism, Graphical User Indamentals of Python First Programs, Kenneth. A. Lambert, Control	From: 01/07/2021  To: 22/07/2021	<b>Delivery</b> Online

	paradigm; tkinter module,	From:	
46	creating simple GUI; buttons, labels, entry fields, dialogs;	23/07/2021	
47	widget attributes - sizes, fonts, colors layouts, nested frames		
48	Multithreading, Networks,	To:	Online
49	Client/Server Programming;	14/08/2021	
50	introduction to HTML		
51	interacting with remote HTML server,		
52	running html-based queries, downloading pages;		
53	CGI programming, programming a simple CGI form.		
54	Tutorial		

Signature of Faculty

Signature of HOD

SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108