

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF CIVIL ENGINEERING

I Year - I SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	BS1101	Mathematics – I	3	0	0	3
2	BS1102	Mathematics – II	3	0	0	3
3	BS1108	Engineering Physics	3	0	0	3
4	ES1104	Engineering Mechanics	3	1	0	4
5	ES1103	Engineering Drawing	1.	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1109	Engineering Physics Lab	0	0	3	1.5
8	PR1101	Engineering Exploration Project	0	0	2	1
		Total Credits	16	0	12	19.5

I Year - II SEMESTER

Sl. No	Course	Subjects	L	T	P	Credits
1	HS1201	English	3	0	0	3
2	BS1203	Mathematics – III	3	0	0	3
3	BS1210	Engineering Chemistry	3	0	0	3
4	ES1201	Programming for problem Solving Using C	3	0	0	3
5	ES1207	Computer Aided Engineering Drawing	1	0	3	2.5
6	ES1202	Programming for problem Solving Using C Lab	0	0	3	1.5
7	BS1211	Engineering Chemistry Lab	0	0	3	1.5
8	HS1203	Communications Skills Lab	0	0	3	1.5
9	ES1219	Workshop Practice Lab	0	0	3	1.5
10	MC1201	Environmental Science	3	0	0	0
		Total Credits	15	0	11	20.5

TENTATIVE LESSON PLAN: R19HS1201

Course Title:			,	15.
Section : CI		Date: 0602-2020		o:01 of 03
Revision No		Prepared By: Mr. Yellamanda Vusa	Appro	ved By: HOD
Tools: Black				
No. of Period	ls	TOPIC	Date	Mode of
				Delivery
CO1: Facilita English spok	ate effecti en by nat	ll of happiness, Deliverance by Premcha ve listening skills for better comprehens ive speakers Maruthi Publications, —The Individual So	ion of academic	
1		wer full of happiness	6-2-20	
2	Lister	ning : Short Audio Texts	6-2-20	
3	Speak	ting: Asking and answering questions	6-2-20	Lecture
4	Readi	ng: Skimming and Scanning	10-2-20	interspersed with
5	Readi	ng for Writing: Paragraph writing	10-2-20	discussions
6	Vocal	oulary: Technical Vocabulary	10-2-20	
7	Gram	mar: Content words and function words	11-2-20	
8	The D	eliverance: Munshi Prem Chand	11-2-20	
9	Long	Answers	13-2-20	
10	Short	Answers	13-2-20	1
CO2: Focus and authenti	on appro c materia	to his daughter Indira on her birthday, Bos priate reading strategies for comprehens ls aruthi Publications, —The Individual Societ	sion of various	academic texts
12	Nehr	a's letter to his daughter Indira on her day	15-2-20	
13	Lister	ning: Answering a series of questions	15-2-20	
14	Speak	ing: Discussion in pairs	17-2-20	
15	Readi	ng: Identifying sequence of ideas	17-2-20	Lecture interspersed

16	Reading for Writing: Summarizing	18-2-20	with
17	Vocabulary: Technical vocabulary	18-2-20	discussions
18	Grammar: Use of articles	18-2-20	
19	Bosom Friend Hira Bansode	20-2-20	
20	Long Answers	20-2-20	
21	Short Answers	20-2-20	

UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf

CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations

TB: Infotech English, Maruthi Publications, -The Individual Society, Pearson Publications

24	Stephen Hawking-Positivity 'Benchmark	24-2-20	
25	Listening: Listening for global comprehension	24-2-20	Lecture interspersed
26	Speaking: Discussing specific topics in pairs	24-2-20	with discussions
27	Reading: Reading a text in detail	25-2-20	discussions
28	Reading for Writing: Summarizing	25-2-20	
29	Vocabulary: Technical vocabulary	27-2-20	
30	Grammar: Verbs - tenses; subject-verb agreement	27-2-20	
31	Shakespeare's Sister by Virginia Woolf	29-2-20	
32	Long Answers	29-2-20	

UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka

CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.

TB: Infotech English, Maruthi Publications, —The Individual Society, Pearson Publications

33	Like a Tree, Unbowed: Wangari Maathai- biography	2-3-20	
34	Listening: Making predictions while listening	2-3-20	Lecture interspersed
35	Speaking: Role plays for practice of conversational	2-3-20	with

English	Compare of the contract of the	discussions
Reading: Studying the use of graphic elements	3-3-20	
Reading for Writing: Information transfer	3-3-20	
Vocabulary: Technical vocabulary	5-3-20	
Grammar: Quantifying expressions	7-3-20	
Telephone Conversation: Wole Soyinka	7-3-20	
	Reading: Studying the use of graphic elements Reading for Writing: Information transfer Vocabulary: Technical vocabulary Grammar: Quantifying expressions	Reading: Studying the use of graphic elements 3-3-20 Reading for Writing: Information transfer 3-3-20 Vocabulary: Technical vocabulary 5-3-20 Grammar: Quantifying expressions 7-3-20

UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou

CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing

TB: Infotech English, Maruthi Publications, —The Individual Society, Pearson Publications

41	Stay Hungry-Stay foolish	9-3-20	
42	Listening Identifying key terms	9-3-20	Lecture interspersed
43	Speaking: Formal oral presentations	10-3-20	with discussions
44	Reading: Reading for comprehension	12-3-20	
45	Reading for Writing: Writing academic proposals	16-320	
46	Vocabulary: Technical vocabulary	17-3-20	7
47	Grammar: Editing short texts	17-3-20	

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TENTATIVE LESSON PLAN: R19BS1203

Section : CE	Date:	Page No	o: 01 of 04
Revision No : 0			ed By : HOD
Tools: Black bo		11.	ed by . Hob
No. of Periods	TOPIC	Date	Mode of
110. Of Terrous	10110	24.0	Delivery
IINIT - I. VEC	TOR CALCULUS		Benvery
CO1: To interp			
	rentoperatorssuchasgradient, curland divergence,	to	
•	kdoneagainstafield, circulationandfluxusingvector		
	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand I		
1 D. Eligineeri	Vector Differentiation: Introduction	Jubileations	
2	Properties of vectors and scalars		
3	Derivative of vector – definition	From: 6/2/2020 To	Lecture interspersed with discussions
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities		
. 10	Vector identities .		
11	Problems on application of gradient		
12	Problems on divergence and curl	25/2/2020	
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		
	heLaplacetransformfor solvingdifferentialequation		
ГВ:" Engineeri	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand p	oublications	
22	Laplace Transforms: Definitions, Existence		
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties		
	Change of scale property	From	Lecture
25	Laplace Transforms of derivatives; Integrals	26/2/2020	intersperse
26	$L(t^n f(t))$	То	with
27	Laplace Transforms of division by t	11/3/2020	discussions
28		1	
20	Evaluation of integrals	350 10 - 410 62	1000

	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions		
30	Inverse Laplace Transforms:	1	
	Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		

CO3:TO findorcomputetheFourierseriesofperiodicsignals ,abletoapply integral expressionsfor theforwardsandinverseFouriertransformtoarangeofnon-periodicwaveforms TB: Engineering Mathematics, Dr. T.K.V.Iyengar; S.Chand publications

34	Introduction		
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions	From	Lecture
39	Change of interval	12/3/2020	interspersed
40	Half range sine and cosine series	To	with
41	Fourier transforms	11/4/2020	discussions
42	Fourier integral theorem		discussions
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		

UNIT - IV: PDE OF FIRST ORDER

 $CO 4: To\ identify solution methods for partial differential equations that model physical processes$

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

48	Introduction	a publications	
49	Formation of PDE by eliminating arbitrary		
	constants		
50	Formation of PDE by eliminating arbitrary		
	functions		
51	Solutions of PDE	From	
52	Method of grouping	12/3/2020	Lecture
53	Method of multipliers	To	interspersed
54	Nonlinear PDE $f(p,q) = 0$	11/4/2020	with
55	Nonlinear PDE $f(p,q,z) = 0$	11/ 1/2020	discussions
56	Nonlinear PDE $f(p,x) = g(q,y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n) = 0$		
60	$f(pz^m, qz^m) = 0$		

UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS CO5:

TB:" Engine	ering Mathematics", Dr. T.K.V.Iyengar; S.Chand	publications	
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From	Lecture
62	$\sin(ax + by); \cos(ax + by)$	27/4/2020	interspersed
63	$x^m y^n$	To	with
64	Method of separation of variables	7/5/2020	discussions
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

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ENIKEPADU, VIJAYAWADA-521 108



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

Tentative Lesson Plan ENGINEERING CHEMISTRY: (BS1210)

Course Title: B.Tec	1	
Section : CIVIL	Date:6/2/2020	Page No: 3
Revision No:	Prepared By: B.SOWJANYA	
	Tropared by. D.SO WJANIA	Approved By

Tools: Black board

No. of Pe	riods-76 TOPIC	Date	Mode of Delivery
S.NO	TOPIC		
Engineer	UNIT –I-HIGH POLYM inderstand the various types of polymers and helps in selecting suitable materials for differentials (hemistry" by, Dr. Bharathi kumara	the formation mechanisms, plastics,	rubber and the
1.	Polymerisation:- Introduction	6/2/2020	
2.	Mechanism of polymerization	7/2/2020	
3.	Stereo regular polymers	8/2/2020	
4.	Methods of polymerization(emulsion ar	nd suspension) 11/2/2020	Lecture
5.	Physical and mechanical properties	11/2/2020	Interspersed
6.	Advantages and limitations of plastics	11/2/2020	With
7.	Thermoplastics and Thermosetting plas	tics 12/2/2020	Discussions
8.	Compounding of plastics	12/2/2020	Discussion
9.	Fabrication (4/5 techniques) of plastics	13/2/2020	
10.	Preparation, properties and applications	of PE,PVC 13/2/2020	
11	Bakelite Teflon and polycarbonates	13/2/2020	
12	Elastomers: - Natural rubber- compound	ling	
13	Vulcanization - Synthetic rubbers : Bun	a S. Buna N. 14/2/2020	
14	Thiokol ,polyurethanes -Applications of	elastomers 15/2/2020	
15	Composite materials & Fiber reinforced	plastics 15/2/2020	
16	Biodegradable polymers – Conducting n	olymers 15/2/2020	
orrosion an E ngineeri n 17	UNIT-II-ELECTROCHEMICAL in the knowledge about the conductivities of dge about the fuel cells working principles. In the distriction of the conductivities of the conductivities of distriction of the conductivities of the conductivities of distriction of the conductivities of distriction of the conductivities of th	Solutions, how the cells charging a Tounderstanding the problems assorted Yallamanchili, VGS.	and discharging
18	Single electrode potential – Electro chemand uses	ical series 25/2/2020	
19	Standard electrodes (Hydrogen and Calor electrodes)		TAYOUT TO PRODUCE TO SEC.
20	Concentration Cells -Batteries: Dry Cell	Ni-Cd cells 26/2/2020	The section of the Table
21:	Ni-Metal hydride cells - Li cells - Zinc -	air cells. 26/2/2020	Last



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Department of Science and Humanities

	Fuel Cells	27/2/2020	Transaction of
22	Corrosion: - Definition - Theories of Corrosion	27/2/2020	Intergrange
23	Formation of galvanic cells by different metals	29/2/2020	Interspersed With
24	concentration cells, differential aeration, waterline corrosion	3/3/2020	Discussions
25	Passivity of metals – Pitting corrosion - Galvanic series	4/3/2020	
26	Factors which influence the rate of corrosion	4/3/2020	
27	Protection from corrosion – Design and material selection	4/3/2020	
28	Cathodic protection - Metallic (cathodic & anodic) coatings	5/3/2020	
29	(Galvanizing, Tinning, Electroplating, Electroless plating)	5/3/2020	

UNIT III: CHEMISTRY OF MATERIALS

CO3: To gain the Knowledge of advanced materials related to engineering applications is helpful in solving major engineering problems.

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

30	Part- A: Nano materials:-	71-1-	
	Tate 11. Ivano materiais	6/3/2020	Lecture
30	Introduction-sol-gel method-characterization by BET, SEM	7/3/2020	Interspersed
31	and TEM methodsapplications of graphene-carbon nanotubes	10/3/2020	With
32	and fullerenes:Types, preparation and applications Thermal	11/3/2020	Discussions
33	analysis techniques: Instrumentation and applications of	12/3/2020	
34	thermogravimetric analysis (TGA), differential thermal	13/3/2020	
35	analysis (DTA), differential scanning calorimetry (DSC).	17/3/2020	
36	Part-B: Refractories: - Definition, classification, properties),	4/4/2020	Lecture
37	refractoriness, refractoriness under load, porosity	7/4/2020	Total
38	(and thermal spalling), failure of refractories. Lubricants: -	9/4/2020	Interspersed With
39	Definition, mechanism of lubricants and properties (definition	9/4/2020	Discussions

UNIT IV-FUEL TECHNOLOGY

CO4: To gainknowledge of fuels, their occurrence, refining process and their formulation to improve the efficiency of machines or engines.

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

40-	- Freel- I . 1	V. UO
40	Fuels - Introduction - Classification -	11/4/2020
+ - 41	Calorific value - HCV and LCV - Dulong's formula	
10-	Bomb calorimeter Nimerical 11	14/4/2020

43 Coal - Proximate and ultimate analysis – Significance 16/4/2020 Interspersed



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Department of Science and Humanities

44	Liquid fuels – Petroleum- Refining	16/4/2020	With
45	Cracking- Synthetic petrol	18/4/2020	Discussions
46	Petrol ,Diesel knocking - Octane and Cetane ratings	18/4/2020	Discussions
47	Anti-knock agents – Power alcohol – Bio-diesel	18/4/2020	
48	Gaseous fuels - Natural gas, LPG and CNG	21/4/2020	
49	Combustion – Calculation of air for the combustion of a fuel	21/4/2020	
50	Flue gas analysis, Orsat apparatus problems on combustion	23/4/2020	
51	Explosives:- Rocket fuels	23/4/2020	

UNIT- V-WATER TECHNOLOGY

CO5: To gain the knowledge about Hard water and Soft water. Which type of water should be used in the softening process of hard water.

Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili VGS

8	g Chemistry by, Dr. Bharann kumara ranamanchin,	VUS.	
52	Hardness of water ,Determination of hardness by complexometric method	25/4/2020	
53	Boiler troubles (priming and foaming, scale formation, boiler corrosion	28/4/2020	Lecture
54	caustic embrittlement)-internal treatments- softening of hard water	30/4/2020	Interspersed
55	zeolite processs and related sums, ion exchange process	2/5/2020	With
56	Treatment of industrial waste water Portable water and its specifications-steps involved in purification of water-	7/5/2020 9,12/5/2020	Discussions
57	chlorination, break point chlorination-reverse osmosis and electro dialysis	14,16,19/5/202	

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

B. Sow janya 1202 | Signature of Faculty 1202 |

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TENTATIVE LESSON PLAN: R19ES1201 PROGRAMMING FOR PROBLEM SOLVING USING C

	Title: PROGRAMMING FOR PROBLEM SOLVIN : CIVIL Date: 06/02/2020	Page No: 01	of 03
	n No: 00 Prepared By: SK. REHANA	Approved By	
Tools: E	Black board, PPTs, Moodle		
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I CO1: T progran	Introduction to C language To learn about the computer systems, computing envir in and Structure of a C Program. Togramming for Problem Solving, Behrouz A. Forouza		computer
1	Computer Systems .		1
2	Computing Environments		
-3	Computer languages		
4	Creating and running Programs		
5	Computer Numbering System		
6	Storing Integers	From:	Lecture
7	Storing Real Numbers	1 Iom.	Interspersed
. 8	C Programs, Identifiers	6/2/2020	With
9	Types, Variable		discussions
10	Constants, Input/output	To ·	
11	Programming Examples	25/2/2020	
12	Scope, Storage Classes and Type Qualifiers		
13	Expressions Precedence and Associativity		
14	Side Effects, Evaluating Expressions		
15	Type Conversion Statements		
16	Simple Programs		
17	Command Line Arguments		
18	Tutorial		
UNIT-I	I Operators, Selection and Repetition		
	o gain knowledge of the operators, selection, control strogramming for Problem Solving, Behrouz A. Forouzz		
19	Exact Size Integer Types		
20	Logical Bitwise Operators		
21	Shift Operators		
22	Logical Data and Operators		
23	Two Way Selection		Lecture
24	Multiway Selection		interspersed

More Standard Functions

26	Concept of Loop	Section 1	discussions
27	Pretest and Post-test Loops	From	
28	Initialization and Updating	26/2/2020	
29	Event and Counter Controlled Loops	26/2/2020	
30	Loops in C	To	
31	Other Statements Related to Looping		
32	Looping Applications	11/3/2020	
33	Programming Example The Calculator Program		
35	Tutorial		
No. of	TOPIC	Date	Mode of
Periods			Delivery
UNIT-III	Arrays, String, Enum, Structure, Unions		
	learn about the design concepts of arrays, strings, enumerated	structure and	union types.
	about their usage.		
	gramming for Problem Solving, Behrouz A. Forouzan, Richar	d F.Gilberg, CI	ENGAGE
36	Concepts, Using Array in C		
37	Array Application		
38	Two Dimensional Arrays		
39	Multidimensional Arrays		
40	Programming Example – Calculate Averages		
41	String Concepts, C String		
42	String Input / Output Functions .	From	
43	Arrays of Strings		
44	String Manipulation Functions	12/3/2020	
45	String/ Data Conversion	То	т.
46	A Programming Example – Morse Code		Lecture
47	The Type Definition (Type def)	11/4/2020	interspersed
48	Enumerated Types		With
49	Structure		discussions
50	Unions		
51	Programming Application		
52	Tutorial		
UNIT-IV	Pointers		
CO4: To	assimilate about pointers, dynamic memory allocation and know	ow the significa	nce of
Preproces		o uno organitea	
ΓB1: Pro	gramming for Problem Solving, Behrouz A. Forouzan, Richar	d F.Gilberg, CI	ENGAGE
No. of Periods	TOPIC	Date	Mode of
53	Introduction		Delivery
54	Pointers to pointers	-	
55	Compatibility, L value and R value	\dashv	Lecture
			interspersed
56	Arrays, and Pointers		interspe

5.7	Pointer Arithmetic and Arrays	From	with
58	Memory Allocation Function]	discussions
59	Array of Pointers	13/4/2020	
60	Programming Application	То	
61	Processor Commands		
62	Tutorial	25/4/2020	
UNIT-	Files and Functions		
	o assimilate about File I/O and significance of functions.		
	rogramming for Problem Solving, Behrouz A. Forouzan, Richard	I F.Gilberg, CI	ENGAGE
63	Function in C		
64	User Defined Functions .		
65	Inter-Function Communication	_	
66	Standard Functions		
67	Passing Array to Functions	From	
68	Passing Pointers to Functions	Trom	
69	Recursion	27/4/2020	
70	Passing an Array to Function	1	Lecture
71	Files, Streams	То	interspersed with
72	Standard Library Input / Output Functions	7/5/2020	discussions
.73	Formatting Input / Output Functions	717572020	discussions
74	Character Input / Output Functions		
75	Text versus Binary Streams		
76	Functions for Files		
77	Converting File Type		
78	Designing, Structured Programs		
79	Tutorial		

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA KAKINADA – 533 003, Andhra Pradesh, India DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE STRUCTURE-R19

I Year - I SEMESTER

SI. No	Course Code	Subjects	L	T	P	Credits
1	HS1101	English	3	0	0	3
2	BS1101	Mathematics - I	3	0	0	3
3	BS1106	Applied Chemistry	3	0	0	3
4	ES1101	Programming for Problem Solving Using C	3	0	0	3
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1107	Applied Chemistry Lab	0	0	3	1.5
8	ES1102	Programming for Problem Solving Using C Lab	0	0	3	1.5
9	MC1101	Environmental Science	3	0	0	0
		Total Credits	16	0	12	19

I Year - II SEMESTER

Sl.	Course	Subjects	L	T	P	Credits
No	Code					
1	BS1202	Mathematics – II .	3	0	0	3
2	BS1203	Mathematics – III	3	0	0	3
3	BS1204	Applied Physics	3	0	0	3
4	ES1212	Fundamentals of Computers	3	0	0	3
5	ES1217	Electrical Circuit Analysis - I	3	0	0	3
6	ES1218	Electrical Engineering Workshop	0	0	3	1.5
7	BS1205	Applied Physics Lab	0	0	3	1.5
8	HS1203	Communication Skills Lab	0	1	2	2
9	PR1201	Engineering Exploration Project	0	0	2	1
		Total Credits	15	1	10	21

TENTATIVE LESSON PLAN: R19BS1202

Section : EEE	Date: 26-08-2019	Page No	:01 of 02
Revision No: 0			ed By : HOD
Tools: Black bo		12001011	Ju Dy : HOD
No. of Periods	TOPIC	Date	Mode of Delivery
VECTORS CO1: solve syst Seidel (L3) TB:" Engineeri	IG SYSTEM OF LINEAR EQUATIONS, EIGENem of linear algebraic equations using Gauss eling Mathematics", Dr. T.K.V.Iyengar; S.Chan	imination, 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	F	
8	Problems on rank method	From 06-02-2020	
9	Gauss Elimination method	To 22-02-2020	
10	Eigen values – definition		
11	Properties of Eigen values		
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
CO2: Develop the applications (L6		ed by engineers for	· practical
B: Engineerin	g Mathematics", Dr. T.K.V.Iyengar; S.Chand Caley Hamilton theorem, verification, problems	publications	

16	Finding inverse and power of a matrix by caley Hamilton theorem		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	16-09-2019	interspersed with
20	Canonical form of a quadratic form	То:	discussions
21	Methods of reducing a QF in to canonical form	05-10-2019	
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

26	Introduction		
27	Method – 1: Bisection method	From: 07-10-2019 To: 19-10-2019 & From:	Lecture interspersed with discussions
28	Problems		
30	Method – 2: Regula falsi method		
31	Problems		
33	Method – 3: Iteration method		
34	Problems		
35	Method – 4: Newton Raphson method		
36	Problems		
37	Newton Raphson method simultaneous equations	28-10-2019	
38	Gauss Jacobi Method	To: - 09-11-2019	
39	Gauss Seidal Method		
40	problems		

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		
43	Problems		
44	Newton's Backward interpolation formula	From: 11-11-2019 To: 30-11-2019	Lecture interspersed with discussions
45	Problems		
46	Gauss Forward interpolation formula – Problems		
47	Problems		
48	Gauss Backward interpolation formula – Problems		
49	Problems		
50	Lagranges interpolation formula – Problems	980	
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		
58	Problems	From	Lecture
59	Picard's method of successive approximation	04-05-2020 To 23-05-2020	interspersed with discussions
60	Euler's method		
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

K. Bunavarresu Signature of Faculty 22/11/20

Signature of HOD 2/12/2020

TENTATIVE LESSON PLAN: R19BS1203

Section : EEE	Date:	Page N	o:01 of 04
Revision No : 0			ved By : HOD
Tools: Black bo		Approv	veu by : HOL
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT – I: VEC	TOR CALCULUS		Denvery
CO1: To interp			
	rentoperatorssuchasgradient,curlanddi	vergence, to	
	kdoneagainstafield, circulationandfluxu		
	ng Mathematics", Dr. T.K.V.Iyengar;		
1	Vector Differentiation:Introduction		
2	Properties of vectors and scalars	1 A 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C	
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		Lecture interspersed with discussions
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities	From:	
10 .	Vector identities	.6/2/2020	
11	Problems on application of gradient	To	
12	Problems on divergence and curl	25/2/2020	
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		
UNIT – II: LAPI	ACE TRANSFORMS		
CO2: To applyt	neLaplacetransformfor solvingdifferentia	alequations	
ΓB:" Engineeri	ng Mathematics", Dr. T.K.V.Iyengar; S	S.Chand publications	
22	Laplace Transforms: Definitions, Existe		
23	Laplace Transform of standard function		
24	Linearity property; Shifting properties		
	Change of scale property	From	Lecture
25	Laplace Transforms of derivatives; Integ	26/2/2020	interspersed
26		10	with
27	$L(t^n f(t))$	11/3/2020	discussions
	Laplace Transforms of division by t		415045510115
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit		
	step functions; Unit impulse functions		
30	Inverse Laplace Transforms:		
	Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
	OURIER SERIES AND FOURIER TRANSFORMS		
CO3:TO	OURIER SERIES AND FOURIER TRANSFORMS findorcomputetheFourierseriesofperiodicsignals	,abletoapply i	ntegral
CO3:TO expressions fo	OURIER SERIES AND FOURIER TRANSFORMS findorcomputetheFourierseriesofperiodicsignals r theforwardsandinverseFouriertransformtoaran	geofnon-periodicwaye	ntegral
CO3:TO expressions fo	OURIER SERIES AND FOURIER TRANSFORMS findorcomputetheFourierseriesofperiodicsignals r theforwardsandinverseFouriertransformtoaran	geofnon-periodicwaye	ntegral eforms
CO3:TO expressions fo	OURIER SERIES AND FOURIER TRANSFORMS findorcomputetheFourierseriesofperiodicsignals	geofnon-periodicwaye	ntegral eforms
CO3:TO expressionsfo TB:" Engineer	OURIER SERIES AND FOURIER TRANSFORMS findorcomputetheFourierseriesofperiodicsignals r theforwardsandinverseFouriertransformtoarang ing Mathematics", Dr. T.K.V.Iyengar; S.Chand public Introduction Periodic functions	geofnon-periodicwaye	ntegral eforms
CO3:TO expressionsfo TB:" Engineer	OURIER SERIES AND FOURIER TRANSFORMS findorcomputetheFourierseriesofperiodicsignals r theforwardsandinverseFouriertransformtoaranging Mathematics", Dr. T.K.V.Iyengar; S.Chand public Introduction	geofnon-periodicwaye	ntegral eforms

34	Introduction		
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions	From	Lecture
39	Change of interval	12/3/2020	
40	Half range sine and cosine series	То	interspersed
41	Fourier transforms	11/4/2020	with
42	Fourier integral theorem		discussions
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46 .	Inverse transforms	•	
47	Finite Fourier transforms		
TIMITE IN. D	DE CE EIDEE CARRED		-

UNIT – IV: PDE OF FIRST ORDER

CO4: To identify solution methods for partial differential equations that model physical processes

48	Introduction		
49	Formation of PDE by eliminating arbitrary constants		
50	Formation of PDE by eliminating arbitrary functions		Lecture interspersed with discussions
51	Solutions of PDE	F	
52	Method of grouping	From 12/3/2020	
53	Method of multipliers	To	
54	Nonlinear PDE $f(p,q) = 0$	11/4/2020	
55	Nonlinear PDE $f(p,q,z) = 0$	11/4/2020	
56	Nonlinear PDE $f(p,x) = g(q,y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m,qy^n)=0$		
60	$f(pz^m, qz^m) = 0$		

UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS CO5:

TB: Engine	ering Mathematics", Dr. T.K.V.Iyengar; S.Chand	publications	
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From	Lecture
62	$\sin(ax + by); \cos(ax + by)$	27/4/2020	interspersed with discussions
63	$x^m y^n$	То	
64	Method of separation of variables	7/5/2020	
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

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TENTATIVE LESSON PLAN: BS1204/R19

	Course Titl	TENTATIVE LESSON PLAN le: Applied Physics	. B31204/K	.[7]
	Section : I		Page N	o:00
		0:00 Prepared By : M.Vidya Elizabeth		red By : HOD
	Tools:			A STANDARD OF THE STANDARD OF
	No. of	TOPIC	DATE	Mode of
	Periods	UNIT- I WAVE OPTICS		Delivery
	UNIT -I			
		CO1: Analyze the differences between interference and		T ,
		diffraction with applications. And illustrate the resolving	ng	Lecture
		power of various optical instruments.		interspersed with
	1	Introduction, Principle of Super Position	06/02/20	discussions
	2	Interference of light, Conditions for Sustained	То	discussions
		Interference	06/03/20	
	3	Interference in thin films		
	4	Newton Rings		
	5	Newton Rings, Problems		
	6	Diffraction-Fraunhofer diffraction.		
	7	Diffraction due to single slit		COLUMN TENTON
	8	Double slit, N-Slit		
	9	Circular aperture, Intensity distribution curves		
3	10	Rayleigh Criterion		
1	11	Diffraction Grating		
	12	Resolving Power of Telescope, Grating		Lecture
	13	RP OF Microscope		interspersed with
	UNIT II	Problems QUANYUM MECHANICS:		discussions
	UNITH	CO2: Explain the fundamental concepts of quantum		discussions
		mechanics. Analyze the physical significance of wave		
		function and apply the Schrodinger wave equation for		
		energy values of free particle.		
	15	Introduction, Mater waves. De Broglie waves	07/03/20	
	16	Davison and German expt,	To	
	17	G.P.Thomson expt,	14/03/20	
	18	Hesenberg uncertainty principle		
1	19	Schrodinger time dependent wave equation		
1	20	Schrodinger time independent wave equation		
1	21	Particle in a box		
1	22	Problems		Lecture
	UNIT-III	CLASICAL FREE ELECTRON THEORY AND		interspersed
		BAND THEORY OF SOLIDS		with
		CO3:Analyze the effect of temperature on Fermi-Dir		discussions
-		distribution function and summarize various types		
		solids based on band theory. electron theory in the stud	dy	
-		of electrical conductivity.		
-	23	Classical free electron theory, merits and demerits	15/03/20	
-	24	Quantum free electron theory	To	
1	25	Fermi Dirac distribution function and its temperature	12/04/22	
+	200	dependendence	13/04/20	
-	26	Fermi energy, Density of states	ore safe	Carrier and the same
-	27	Blochs theorem, Kronig penney model	3.44.5.5.76.72	
-	28	Kronig penney model	244	
	29	Energy bands- Classification of materials		

30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems		Lecture
UNIT-IV:	SEMICONDUCTUR PHYSICS	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	interspersed
ration was to the establishment revenues their states. The first section of the	CO4: Classify the energy bands of semiconductors, out	1	with
***************************************	line the properties of N and P type semiconductors and		discussions
	identify the type of semiconductor using Hall effect.		
33	Introduction-Intrinsic semiconductor		
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
. 36	p-type and n-type-density of charge carriers	15/04/00	
37	Dependence of Fermi energy on carrier concentration and	15/04/20	
38	temperature, Hall effect,	To .	
39	Hall co-efficient, Applications of Hall effect	04/05/20	
40	Drift and diffusion currents		Lecture
41	Einstein's Equation		interspersed
42	Problems		with
UNIT- V	MAGNETISM & DIELECTRICS		discussions
	CO5: Explain the applications of dielectric and		
<u></u>	magnetic materials and apply the concept of magnetism	enner Sanglish Joseph Are market tekning	
	to magnetic devices.		
43	MAGNETISM: Introduction	06/05/20	
44	Magnetic dipole momentum, Magnetization-	To	
45	Magnetic susceptibility and permeability		
46	Origin of permanent magnetic moment	13/05/20	
47	Bohr Magneton -Classification of magnetic materials		
	(Dia, Para and Ferro)		Lecture
48	Soft and hard magnetic materials	V. 4.	interspersed
49	Applications of Ferromagnetic material		with
50	Problems		discussions
51	DIELECTRICS: Introduction,		
52	Dielectric polarization		
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic		
	(Quantitative),		
55	Orientation polarizations	14/05/20	
56	Lorentz internal field	То	
57	Claussius Mossoti equation-	25/05/20	
58	Entrinsic SC's		
59	Drift & Diffusion		
60	Einstein's Equation		
61	Hall Effect & Problems		

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TENTATIVE LESSON PLAN: R19ES1212

ES1212)
Page No: 01 of 02
Approved By: HOD

Periods	TOPIC		Mode of Delivery
CO1: I	: A Simple Computer System Explain the concepts of computers and classify based of Introduction to Computer studies –Noel Kalicharan-	n type and generati Cambridge	
1	Central processing unit	6-2-20	
2	the further need of secondary storage	7-2-20	
3	Types of memory	8-2-20	-
4	Hardware, Software and people	10-2-20	
5	Input, Output and storage	11-2-20	Lecture
6	Data Preparation	12-2-20	Interspers
7	Factors affecting input	13-2-20	- Willi
8	Input devices	14-2-20	discussion
9	Output devices	15-2-20	_
10	Secondary devices	17-2-20	_
	H ###################################	1/-2-20	
11 JNIT-II CO2: De	Communication between the CPU and Input/ Output devices 1: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process.	18-2-20	ow of logic in
11 UNIT-II CO2: De oftware FB1: An	: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies—Noel Kalicharan—	18-2-20 codes & schematic fl	ow of logic in
11 UNIT-II CO2: De oftware FB1: An	: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan-Algorithm development	18-2-20	ow of logic in
JNIT-II CO2: De oftware TB1: An 12	I: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan-Algorithm development Flowcharts	18-2-20 codes & schematic fl	ow of logic in
JNIT-II UNIT-II CO2: De oftware TB1: An 12 13	: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan-Algorithm development	codes & schematic flocambridge 19-2-20	ow of logic in
11 UNIT-II CO2: De oftware TB1: An 12	I: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan-Algorithm development Flowcharts	18-2-20 codes & schematic fl Cambridge 19-2-20 20-2-20	ow of logic in
UNIT-II CO2: De oftware FB1: An 12 13	I: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan- Algorithm development Flowcharts Looping	18-2-20 codes & schematic floc Cambridge 19-2-20 20-2-20 24-2-20	ow of logic in
11 UNIT-II CO2: Desoftware FB1: An 12 13 14	I: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan- Algorithm development Flowcharts Looping some programming features	18-2-20 codes & schematic flucture fluc	ow of logic in
11 UNIT-II CO2: De oftware TB1: An 12 13 14 15 16	I: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan- Algorithm development Flowcharts Looping some programming features Pseudo code the one-zero game	18-2-20 codes & schematic flocambridge 19-2-20 20-2-20 24-2-20 25-2-20 26-2-20 27-2-20	Lecture
11 UNIT-II CO2: De oftware TB1: An 12 13 14 15 16 17 18 19	I: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan- Algorithm development Flowcharts Looping some programming features Pseudo code the one-zero game some structured programming concepts documents	18-2-20 codes & schematic flucture flu	Lecture intersperse with
11 UNIT-II CO2: De oftware TB1: An 12 13 14 15 16 17 18 19 20	I: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan- Algorithm development Flowcharts Looping some programming features Pseudo code the one-zero game some structured programming concepts documents Machine Language and assembly language	18-2-20 codes & schematic flucture fluc	Lecture intersperse with
11 UNIT-II CO2: Desoftware FB1: An 12 13 14 15 16 17 18 19 20 21	I: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan- Algorithm development Flowcharts Looping some programming features Pseudo code the one-zero game some structured programming concepts documents Machine Language and assembly language high -level and low level languages	18-2-20 codes & schematic flucture flu	Lecture intersperse with
11 UNIT-II CO2: De oftware TB1: An 12 13 14 15 16 17 18 19 20	I: Problem Solving and Programming emonstrate the techniques of writing algorithms pseudo of development process. Introduction to Computer studies –Noel Kalicharan- Algorithm development Flowcharts Looping some programming features Pseudo code the one-zero game some structured programming concepts documents Machine Language and assembly language	18-2-20 codes & schematic flor Cambridge 19-2-20 20-2-20 24-2-20 25-2-20 26-2-20 27-2-20 28-2-20 2-3-20 3-3-20	Lecture intersperse

CO3: Teach about the purpose of networks and types of networks and media to connect the computers Teach about Operating Systems and its concepts.

TB2: Fu	andamentals of Computers –Reema Thareja-Oxfor	d higher education	
23	Introduction to computer Networks	6-3-20	
24	Network topologies	9-3-20	
25	Types of Networks	11-3-20	Lecture
26	Network Devices	12-3-20	interspersed
27	Open System Inter connection Model	13-3-20	with
28	Evolution of operating systems	16-3-20	discussions
29	Process Management	17-3-20	
30	Command Interpreter	19-3-20	
31	Popular operating systems	20-3-20	

UNIT-IV Database Systems, Computer Systems and Development

CO4: Illustrate about database architecture and its components

TB1: An Introduction to Computer studies –Noel Kalicharan-Cambridge TB2: Fundamentals of Computers –Reema Thareja-Oxford higher education

No. of	TOPIC	Date	Mode of
Periods	AND DESCRIPTION OF THE STATE OF		Delivery
32	File-Oriented Approach	30-3-20	
33	Database-oriented Approach	31-3-20	
34	Database views	1-4-20	7
35	Three-schema architecture	3-4-20	
36	Database models	7-4-20	Lecture
37	Components of database management systems	8-4-20	interspersed
38	Retrieving Data through Queries	9-4-20	with
39	Investigation	13-4-20	discussions
40	Analysis	14-4-20	1
41	Design	15-4-20	1
42	system processing and general program design	16-4-20	
43	Presentation to management and users	20-4-20	+
44	Implementation	21-4-20	1
45	Documents	22-4-20	1

UNIT-V Emerging Computer Technologies

CO5: Illustrate about distributed computing, peer to peer, grid, cloud on demand and utility computing.

TB2: Fundamentals of Computers - Reema Thareja-Oxford higher education

46	Distributed Networking	23,27-4-20	
47	Peer-to-peer Computing	28,29-4-20	Lecture
48	Grid Computing	4,5-5-20	interspersed
49	Cloud Computing	6,7-5-20	with
50	Wireless network	8,11-5-20	discussions
51	Bluetooth	12,13-5-20	

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	Electrical Circuit Analysis - I		
Section :	Date: 6/2/2020	Page No: 1 of 3	
Revision No:		Approved by :H	OD
Tools : Black boa	ard, PP18		
No.of periods	Topics	Date	Mode of Delivery
:O1 :Students a	ction to Electrical Circuits are able to Various electrical networks in presence of active and p g Circuit Analysis by William Hayt and Jack E.Kemmerley,Mc Graw	assive elements. Hill Company,6	th edition
1,2	Basic Concepts of passive elements of R, L, C	7/2/2020 11/2/2020	
3,4	R,L,C V-I relations	12/2/2020 14/2/2020	
5,6	Sources (dependent and independent)	15/2/2020	500
7	Kirchoff's laws	15/2/2020	
. 8	Network reduction techniques(series, parallel, series - parallel, star-to-delta and delta-to-star transformation),	18/2/2020	Lecture
9,10	source transformation technique	19/2/2020 22/2/2020	with discussion
11	nodal analysis to DC networks with independent voltage and current sources	22/2/2020	
12,13	mesh analysis to DC networks with independent voltage and current sources	22/2/2020	
14.	nodal analysis to DC networks with dependent voltage and current sources	25/2/2020	
15	mesh analysis to DC networks with dependent voltage and current source	26/2/2020	
NIT-II Magneti 02 :Students ar ::: Engineering	c Circuits e ableto Electrical networks with network topology concepts Circuit Analysis by William Hayt and Jack E.Kemmerley,Mc Graw	Hill Company,6 t	h edition
16,17	Basic definition of MMF	28/2/2020 29/2/2020	
18,19	flux and reluctance	29/2/2020	+
20,21	analogy between electrical and magnetic circuits	3/3/2020 4/3/2020	Lecture
22,23	Faraday's laws of electromagnetic induction	6/3/2020 7/3/2020	interspersed with
24,25	concept of self and mutual inductance	03-07-2020	discussions
A COUNTY OF STREET	Dot convention		

03-11-2020

13/3/2020

14/3/2020

Dot convention

coefficient of coupling and composite magnetic circuit

analysis of series and parallel magnetic circuits

26

27

28.29

UNIT-III Single Phase A.C Systems

CO3 :Students are able to Any magnetic circuit with various dot conventions.

TB:: Engineering Circuit Analysis by William Hayt and Jack E.Kemmerley, Mc Graw Hill Company, 6 th edition

30	Periodic waveforms (determination of rms, average value and form factor)	14/3/2020	
31,32	concept of phase angle and phase difference	17/3/2020 18/3/2020	
33,34	waveforms and phasor diagrams for lagging, leading networks	20/3/2020 21/3/2020	Lecture
35,36	complex and polar forms of representations	21/3/2020 31/3/2020	interspersed
37,38	Steady state analysis of R, L and C circuits	1/4/2020 3/4/2020	discussions
39,40	power factor and its significance	04-04-2020	
41.42	significance real, reactive and apparent power	4/4/2020 7/4/2020	
43,44	waveform of instantaneous power and complex power	8/4/2020 14/4/2020	

UNIT-IV Analysis of AC Networks

CO4: Students are able to Any R, L, C network with sinusoidal excitation.

TB :: Engineering Circuit Analysis by William Hayt and Jack E.Kemmerley,Mc Graw Hill Company,6 th edition

45,46,47	Extension of node and mesh analysis to AC networks	14/4/2020 15/4/2020	
		17/4/2020	
48,49,50	series and parallel resonance	18/4/2020	
51,52,53,54	selectively band width	21/4/2020 22/4/2020 24/4/2020 25/4/2020	Lecture interspersed with
55.56,57,58	Quality factor	25/4/2020 28/4/2020 29/4/2020	discussions
59,60,61,62	introduction to locus diagram	2/5/2020 5/5/2020	

UNIT-V Network theorems (DC & AC Excitations)

CO5 : Students are able to Electrical networks by using principles of network theorems.

TB :: Engineering Circuit Analysis by William Hayt and Jack E.Kemmerley,Mc Graw Hill Company,6 th edition

	8/5/2020	
Thevenin's theorem	05-09-2020	
Norton's theorem	12/5/2020 13/5/2020	Lecture
Maximum Power Transfer theorem.	15/5/2020 16/5/2020	interspersed
Reciprocity theorem	16/5/2020 19/5/2020	discussions
Millman's theorem	20/5/2020 22/5/2020	
compensation theorem	23/5/2020	
lty Signature of HOD	r	
	Norton's theorem Maximum Power Transfer theorem. Reciprocity theorem Millman's theorem compensation theorem	Norton's theorem 12/5/2020 13/5/2020 13/5/2020 13/5/2020 15/5/2020 16/5/2020 16/5/2020 16/5/2020 16/5/2020 19/5/2020 19/5/2020 19/5/2020 22/5/2020 22/5/2020 23/5/2020 23/5/2020



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF MECHANICAL ENGINEERING

I Year - I SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	BS1101	Mathematics – I	3	0	0	3
2	BS1102	Mathematics – II	3	0	0	3
3	BS1108	Engineering Physics	3	0	0	3
4	ES1101	Programming for Problem Solving Using C	3	0	0	3
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1109	Engineering Physics Lab	0	0	3	1.5
8	ES1102	Programming for Problem Solving Using C Lab	0	0	3	1.5
9	MC1104	Constitution of India .	2	0	0	0
		Total Credits	15	0	12	19

I Year - II SEMESTER

SI. No	Course Code	Subjects	L	T	P	Credits
1	HS1201	English	3	0	0	3
2	BS1210	Engineering Chemistry	3	0	0	3
3	ES1204	Engineering Mechanics	3	0	0	3
4	ES1206	Basic Electrical & Electronics Engineering	3	0	0	3
5	ES1207	Computer Aided Engineering Drawing	1	0	3	2.5
6	HS1203	Communication Skills Lab	0	0	2	1
7	BS1211	Engineering Chemistry Lab	0	0	2	1.5
8	ES1208	Basic Electrical & Electronics Engineering Lab	0	0	. 3	1.5
9	ES1219	Workshop Practice Lab	0	0	3	1.5
10	PR1201	Engineering Exploration Project	0	0	2	1
		Total Credits	13	0	15	21

RIGHT TENTATIVE LESSON PLAN: R19HS1201

Course Title: E				
Section : MEC		Date: 0602-2020		To : 01 of 03
Revision No : 00		Prepared By: Mr. Yellamanda Vusa	Appro	ved By: HOD
Tools: Black bo	ard			
No. of Periods		TOPIC	Date	Mode of Delivery
CO1: Facilitate English spoken	effective by nat	I of happiness, Deliverance by Premcha we listening skills for better comprehens ive speakers Maruthi Publications, —The Individual So	ion of academi	
1		wer full of happiness	6-2-20	
2	Listen	ing : Short Audio Texts	6-2-20	
3	Speak	ing: Asking and answering questions	6-2-20	Lecture
4	Readi	ng: Skimming and Scanning	10-2-20	interspersed with
5	Readi	ng for Writing: Paragraph writing	10-2-20	discussions
5	Vocab	oulary: Technical Vocabulary	10-2-20	
7	Gram	mar: Content words and function words	11-2-20	1
8	The D	eliverance: Munshi Prem Chand	11-2-20	
)	Long A	Answers	13-2-20	
10	Short	Answers	13-2-20	
CO2: Focus on and authentic n	approp naterial lish, Ma	ruthi Publications, —The Individual Societ	sion of various	academic texts
12	Nehru birthd	's letter to his daughter Indira on her ay	15-2-20	
13	Listen	ing: Answering a series of questions	15-2-20	
14	Speak	ing: Discussion in pairs	17-2-20	
15	Readi	ng: Identifying sequence of ideas	17-2-20	Lecture interspersed

16	Reading for Writing: Summarizing	18-2-20	with discussions
17	Vocabulary: Technical vocabulary	18-2-20	
18	Grammar: Use of articles	18-2-20	
19	Bosom Friend Hira Bansode	20-2-20	
20	Long Answers	20-2-20	
21	Short Answers	20-2-20	

UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf

CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations

TB: Infotech English, Maruthi Publications, -The Individual Society, Pearson Publications

24	Stephen Hawking-Positivity 'Benchmark	24-2-20	
25	Listening: Listening for global comprehension	24-2-20	Lecture interspersed
26	Speaking: Discussing specific topics in pairs	24-2-20	with discussions
27	Reading: Reading a text in detail	25-2-20	·
28	Reading for Writing: Summarizing	25-2-20	
29	Vocabulary: Technical vocabulary	27-2-20	
30	Grammar: Verbs - tenses; subject-verb agreement	27-2-20	
31	Shakespeare's Sister by Virginia Woolf	29-2-20	
32	Long Answers	29-2-20	

UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka

CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.

TB: Inforech English, Maruthi Publications.—The Individual Society, Pearson Publications

33	Like a Tree, Unbowed: Wangari Maathai- biography	2-3-20	
34	Listening: Making predictions while listening	2-3-20	Lecture interspersed
35	Speaking: Role plays for practice of conversational	2-3-20	with

And the second s	English		discussions
36	Reading: Studying the use of graphic elements	3-3-20	
37	Reading for Writing: Information transfer	3-3-20	
38	Vocabulary: Technical vocabulary	5-3-20	
39	Grammar: Quantifying expressions	7-3-20	
40	Telephone Conversation: Wole Soyinka	7-3-20	

UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou

CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing TB: Infotech English, Maruthi Publications, —The Individual Society, Pearson Publications

41 Stay Hungry-Stay foolish 9-3-20

42 Listening Identifying key terms 9-3-20

43 Speaking: Formal oral presentations 10-3-20

Lecture interspersed with discussions

43 Speaking: Formal oral presentations 10-3-20 with discussions
44 Reading: Reading for comprehension 12-3-20
45 Reading for Writing: Writing academic proposals 16-320
46 Vocabulary: Technical vocabulary 17-3-20
47 Grammar: Editing short texts 17-3-20

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

Tentative Lesson Plan: (BS1210) ENGINEERING CHEMISTRY

Course Title: ENGI	NEERING CHEMISTRY	
Section : MECHANICAL	Date:6/2/2020	Page No: 3
Revision No:	Prepared By: B.SOWJANYA	Approved By : HOD

Tools: Black board

No. of Periods-76	TOPIC	Date	Mode of
			Delivery

or operties i	inderstand the various types of polymers and the formation mechaelps in selecting suitable materials for different applications. ing Chemistry" by, Dr. Bharathi kumara Yallamanchili, V		rubber and the
1.	Polymerisation:- Introduction	6/2/2020	
2.	Mechanism of polymerization	7/2/2020	
3.	Stereo regular polymers	8/2/2020	
4.	Methods of polymerization(emulsion and suspension)	11/2/2020	Lecture
5.	Physical and mechanical properties	11/2/2020	Intersperse
6.	Advantages and limitations of plastics	11/2/2020	With
7.	Thermoplastics and Thermosetting plastics	12/2/2020	Discussion
8.	Compounding of plastics	12/2/2020	Discussion
9.	Fabrication (4/5 techniques) of plastics	13/2/2020	1
10.	Preparation, properties and applications of PE,PVC	13/2/2020	
11	Bakelite Teflon and polycarbonates	13/2/2020	
12	Elastomers: - Natural rubber- compounding	14/2/2020	
13	Vulcanization - Synthetic rubbers : Buna S, Buna N,	14/2/2020	
14	Thiokol ,polyurethanes -Applications of elastomers	15/2/2020	
15	Composite materials & Fiber reinforced plastics	15/2/2020	
16	Biodegradable polymers – Conducting polymers.	15/2/2020	

CO2: To gain the knowledge about the conductivities of solutions, how the cells charging and discharging and knowledge about the fuel cells working principles. Tounderstanding the problems associated with the corrosion and necessity of corrosion control methods.

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

17	Galvanic cells - Reversible and irreversible cells	18/2/2020	
18	Single electrode potential – Electro chemical series and uses	25/2/2020	Decision of the second
19.	Standard electrodes (Hydrogen and Calomel electrodes)	25/2/2020	
20	Concentration Cells -Batteries: Dry Cell - Ni-Cd cells	26/2/2020	



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21	Ni-Metal hydride cells - Li cells - Zinc - air cells.	26/2/2020	Lecture
	Fuel Cells	27/2/2020	Doctaro
22	Corrosion :- Definition - Theories of Corrosion	27/2/2020	Interspersed
23	Formation of galvanic cells by different metals	29/2/2020	With
24	concentration cells, differential aeration ,waterline corrosion	3/3/2020	Discussions
25	Passivity of metals – Pitting corrosion - Galvanic series	4/3/2020	
26	Factors which influence the rate of corrosion	4/3/2020	
27	Protection from corrosion – Design and material selection	4/3/2020	
28	Cathodic protection - Metallic (cathodic & anodic) coatings	5/3/2020	
29	(Galvanizing, Tinning, Electroplating, Electroless plating)	5/3/2020	

UNIT III: CHEMISTRY OF MATERIALS

CO3: To gain the Knowledge of advanced materials related to engineering applications is helpful in solving major engineering problems.

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

30	Part- A: Nano materials:-	6/3/2020	Lecture
30	Introduction-sol-gel method-characterization by BET, SEM	7/3/2020	Interspersed
31	and TEM methodsapplications of graphene-carbon nanotubes	10/3/2020	With
32	and fullerenes:Types, preparation and applications Thermal	11/3/2020	Discussions
33	analysis techniques: Instrumentation and applications of	12/3/2020	
34	thermogravimetric analysis (TGA), differential thermal	13/3/2020	
35	analysis (DTA), differential scanning calorimetry (DSC).	17/3/2020	
36	Part-B: Refractories: - Definition, classification, properties),	4/4/2020	Lecture
37	refractoriness, refractoriness under load, porosity	7/4/2020	Intergranged
38	(and thermal spalling), failure of refractories. Lubricants: -	9/4/2020	Interspersed With
39	Definition, mechanism of lubricants and properties (definition	9/4/2020	Discussions

UNIT IV-FUEL TECHNOLOGY

CO4: To gainknowledge of fuels, their occurrence, refining process and their formulation to improve the efficiency of machines or engines.

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

40 Fuels – Introduction – Classification – 11/4/2020
41 Calorific value - HCV and LCV - Dulong's formula 14/4/2020
4/ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Botho Cafortificter – Numerical problems 4 14/4/2020 Lecture



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Department of Science and Humanities

43	Coal - Proximate and ultimate analysis - Significance	16/4/2020	Interspersed	
44	Liquid fuels – Petroleum- Refining	16/4/2020	With	
45	Cracking- Synthetic petrol	18/4/2020 Discussion		
46	Petrol ,Diesel knocking - Octane and Cetane ratings	18/4/2020	215003510115	
47	Anti-knock agents – Power alcohol – Bio-diesel	18/4/2020		
48	Gaseous fuels - Natural gas, LPG and CNG	21/4/2020		
49	Combustion – Calculation of air for the combustion of a fuel	21/4/2020		
50	Flue gas analysis, Orsat apparatus problems on combustion	23/4/2020		
51	Explosives:- Rocket fuels	23/4/2020		

UNIT- V-WATER TECHNOLOGY

CO5: To gain the knowledge about Hard water and Soft water. Which type of water should be used in industries and softening process of hard water.

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

	o j j = 1. = 11 in the in a little in the interior in the inte	Y 00.	the fire or a special part of the second
52	Hardness of water ,Determination of hardness by complexometric method	25/4/2020	
53	Boiler troubles (priming and foaming, scale formation, boiler corrosion	28/4/2020	Lecture
54	caustic embrittlement)-internal treatments- softening of hard water	30/4/2020	Interspersed
55	zeolite processs and related sums, ion exchange process	2/5/2020	With
56	Treatment of industrial waste water Portable water and its specifications-steps involved in purification of water-	7/5/2020 9,12/5/2020	Discussions
57	chlorination, break point chlorination-reverse osmosis and electro dialysis	14,16,19/5/202	

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

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TENTATIVE LESSON PLAN

	NGINEERING MECHANICS Date: 10/02/2020	Course code:		
Section : Sec I	Page No: 01 to 03			
Revision No : 00	A SECOND CONTRACTOR OF THE PROPERTY OF THE PRO	Approved By: HOD		
Fools: BLACK	BOARD		Mode of	
No. of Periods	TOPIC	Date	Delivery	
CO1:Become fa application	DUCTION TO ENGG. MECHANICS, SYSTEM miliar with a basic concepts of force and friction on. RING MECHANICS", S.S BHAVIKATTI, 1"Edition	n , direction an	d its	
1	UNIT - 1 Introduction, Basic terminologies	10/02/2020		
2	Laws of mechanics	10/02/2020		
3	Systems of Forces	11/02/2020		
4 5	Resultant of Forces, Parallelogram law, Parallelogram law problems	11/02/2020		
6	Resolution method- concurrent forces, Problems	14/02/2020		
7	Problems	14/02/2020	•	
8	Moment of force, couple, Varignon's theorem	24/02/2020	Lecture interspersed with discussions	
9	Resolution of force to a force and couple, Parallel forces and problems	17/02/2020		
10	Resultant of concurrent system in space	24/02/2020		
11	Resultant of concurrent system in space- problems	25/02/2020		
12	Friction introduction, coefficient of friction, coulomb's laws of dry friction, cone of friction, angle of friction, Problems	29/02/2020		
13	Problems, wedge friction problem	2/03/2020		
14	Ladder problem	3/03/2020		
methods	EQUILIBRIUM OF SYSTEMS OF FORCES wledge about free body diagrams. Solution to prand law of triangle of forces.			
15	Equilibrium of system of forces	5/03/2020	ucations, 2012	
16	Equilibrium of system of forces problems	6/03/2020	1	
17	Problems	8/03/2020	Lecture	
18	Problems- In space	6/03/2020	interspersed with discussions	
		- Dilla min		

44	problems	18/5/2020
45	Principle of work energy, Impulse-momentum	22/5/2020 27/5/2020
46	problems	29/5/2020
47	Revision	1/6/2020
48	Revision	3/6/2020
49	Kinetics - Analysis of body in translation, rotation	5/6/2020
50	Rotation about fixed axis	8/5/2020
51	Analysis in plane motion	11/5/2020
52	problems	13/5/2020
53	problems	18/5/2020 20/5/2020
54	Principle of work energy, Impulse-momentum	22/5/2020 27/5/2020
55	problems	29/5/2020
56	Revision	1/6/2020
57	Revision	3/6/2020
58	Revision	5/6/2020

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Date: 19(12)

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Date: |9|1|2|

PRINCIPAL

Course Title: BASIC ELECTRICAL AND ELECTRONICS Date: 27-01-2020			Page No : 01 of 02		
Revision No: 00		Prepared By:S.NAGESWARA RAO	Approved B		
Tools : Black b		Trepared by .s.a.mols which icao	Approved b	y: HOD	
No. of		TOPIC	Date	Mode of	
Periods			(Planned)	Delivery	
(Planned)			(Tanneu)		
UNIT –I	ELEC	CTRICAL CIRCUITS			
CO1:: learn	the ba	sic principles of electrical law's and analysis	of networks.		
ΓB :: Circuit	ts and	networks by A. Sudhakar, Shyammohan S	Palli		
1		c Definitions	28/1/20		
2	Type	es of network elements	29/1/20		
3		is law	30/1/20		
4	Kirc	hhoff's law	31/1/20	Lecture	
5	Indu	ctive networks	1/2/20	intersperse	
6	Capa	acitive networks	4/2/20	with	
7	Serie	es, parallel circuits	5/2/20	Discussion	
8		delta and delta-star transformations	6/2/20		
9	Num	erical Problems	7/2/20		
NIT –II	DC M	ACHINES	112120		
10 11	The Property of the Party	duction · ciple of operation of DC generator	11/2/20 12/2/20		
200 F 1 784505K	The Property of the Party				
12		requation	13/2/20		
13		es of DC machine	14/2/20		
14		ue equation	15/2/20	Lecture	
15		ications	18/2/20	intersperse	
16		e point starter	19/2/20	with	
17		d control methods of DC motor	20/2/20	discussion	
18		burne's Test	25/2/20		
19		erical Problem	26/2/20		
20	Tuto		27/2/20		
NIT - III	TR	ANSFORMER, ROTATING AC MACHINE			
O3:: Under		the principle of operation and construction		mers.	
B :: Electric	cal Te	chnology by M S Naidu, S Kamakshaiah			
B:: Electric	cal Tec	hnology by U.A.Bakshi			
21	Princ	siple of operation and construction of single			
21		e transformers	3/3/20		
22	-	equation		Lecture	
23	Loss		4/3/20		
			5/3/20	intersperse with	
24		& SC tests	6/3/20	discussions	
25		iency and regulation	11/3/20	discussion	
26		erical Problem	12/3/20		
27	Tuto	ial	13/3/20		

28	Principle of operation and construction of alternators	31/3/20	1
29	Types of alternators	1/4/20	
30	Principle of operation of synchronous motor	3/4/20	
31	Principle of operation of 3-Phase induction motor	7/4/20	
32	Slip-torque characteristics	8/4/20	Lecture
33	Efficiency	9/4/20	interspersed
34	Applications	15/4/20	with
35	Numerical Problem	16/4/20	discussions
36	Tutorial	17/4/20	
TB :: Electro	RECTIFIERS & LINEAR ICs the operation of PN junction diode, half wave, full wonic Devices and circuits by S Salivahanan integrated circuits by D.Roy choudhury	ave rectifiers	and OP-AMPs.
37	PN junction diodes	21/4/20	

	Tutoriai
UNIT - V	TRANSISTORS

Tutorial

38

39

40

41

CO6:: learn the operation of PNP and NPN transistors and various amplifiers.

TB :: Electronic Devices and circuits by S Salivahanan

Half wave, full wave rectifiers

Characteristics of Op-Amps

Applications of Op-Amp

42	PNP and NPN transistor	30/4/20	
43	Transistor as an amplifier	5/5/20	Lecture
44	Transistor amplifier	6/5/20	interspersed
45	Frequency response of CE amplifier	8/5/20	with
46	Concepts of feedback amplifier	12/5/20	discussions
47	Tutorial	13/5/20 ·	

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22/4/20

23/4/20

28/4/20

29/4/20

Lecture

interspersed

with

discussions

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA KAKINADA – 533 003, Andhra Pradesh, India DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

I Year - I SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	HS1101	English	3	0	0	3
2	BS1101	Mathematics - I	3	0	0	3
3	BS1106	Applied Chemistry	3	0	0	3
4	ES1101	Programming for Problem Solving Using C	3	0	0	3
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1107	Applied Chemistry Lab ·	0	0	3	1.5
8	ES1102	Programming for Problem Solving Using C Lab	0	0	3	1.5
9	MC1101	Environmental Science	3	0	0	0
		Total Credits	16	0	12	19

I Year - IISEMESTER

Sl.	Course	Subjects	L	T	P	Credits
No	Code					
1	BS1202	Mathematics – II	3	0	0	3
2	BS1203	Mathematics - III	3	0	0	3
3	BS1204	Applied Physics	3	0	0	3
4	ES1209	Network Analysis	3	0	0	3
5	ES1211	Basic Electrical Engineering	3	0	0	3
6	ES1215	Electronic workshop	0	0	2	1
7	ES1208	Basic Electrical Engineering Lab	0	0	3	1.5
8	BS1205	Applied Physics Lab	0	0	3	1.5
9	HS1203	Communication Skills Lab	0	0	2	1
10	PR1201	Engineering Exploration Project	0	0	2	1
***************************************			15	0	12	21

TENTATIVE LESSON PLAN: R19BS1202

Section : ECE		Page No	:01 of 02
Revision No: 0	0 Prepared By : S.KALPANA		ed By : HOD
Tools: Black be			
No. of Periods	TOPIC	Date	Mode of Delivery
VECTORS CO1: solve syst Seidel (L3)	NG SYSTEM OF LINEAR EQUATIONS, EIG em of linear algebraic equations using Gauss ng Mathematics", Dr. T.K.V.Iyengar; S.C.	s elimination, 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	-	
8	Problems on rank method	From 06-02-2020	Lecture intersperse
9	Gauss Elimination method	To 22-02-2020	with discussion:
10	Eigen values – definition		alboassion.
11	Properties of Eigen values		
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
JNIT – II:, CAL CO2: Develop th pplications (L6	EY-HAMILTON THEOREM, QUADRATIC ne use of matrix algebra techniques that is ne	FORMS eeded by engineers for	practical

16	Finding inverse and power of a matrix by caley Hamilton theorem	TOTAL COLUMN TWO	
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	16-09-2019	interspersed with
20	Canonical form of a quadratic form	То:	discussions
21	Methods of reducing a QF in to canonical form	05-10-2019	
22	Orthogonal reduction method		
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF	The state of the s	

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

	oring traditionalities, Dr. 1112, vily engar, D. Chand p	abiteations	
26	Introduction		
27	Method – 1: Bisection method		
28	Problems		
30	Method – 2: Regula falsi method	From:	
31	Problems	07-10-2019	
33	Method – 3: Iteration method	To:	
34	Problems	19-10-2019	Lecture
35	Method – 4: Newton Raphson method	&	interspersed
36	Problems	From:	with
37	Newton Raphson method simultaneous equations	28-10-2019	discussions
38	Gauss Jacobi Method	To:	
39	Gauss Seidal Method	09-11-2019	
40	problems		

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	200000000000000000000000000000000000000	***********
43	Problems	1	
44	Newton's Backward interpolation formula	1	Lecture
45	Problems	From:	interspersed with
46	Gauss Forward interpolation formula – Problems	11-11-2019	discussions
47	Problems	To:	
48	Gauss Backward interpolation formula – Problems	30-11-2019	
49	Problems		
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		
58	Problems		.
59	Picard's method of successive approximation	From 04-05-2020	Lecture interspersed
60	Euler's method	To 23-05-2020	with discussions
61	Euler's modified method		
62	Problems	-	
63	Runge kutta method		
64	Problems		

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TENTATIVE LESSON PLAN: R19BS1202

	ATHEMATICS - II	Daga No.	: 01 of 02
Section : ECE Revision No : 00			d By : HOD
Tools: Black bo		Approve	и ву . нов
No. of Periods	TOPIC	Date	Mode of Delivery
VECTORS CO1: solve syste Seidel (L3)	G SYSTEM OF LINEAR EQUATIONS, EIGEN VA em of linear algebraic equations using Gauss elimin ng Mathematics", Dr. T.K.V.Iyengar; S.Chand p	nation, 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	06-02-2020	
9	Gauss Elimination method	To 22-02-2020	
10	Eigen values – definition	1	
11	Properties of Eigen values		
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
CO2: Develop the applications (L6		by engineers for	· practical
15 Engineerin	g Mathematics", Dr. T.K.V.Iyengar; S.Chand proceed Caley Hamilton theorem, verification, problems	udifications	
13	Carej Transition incorein, verification, problems		

16	Finding inverse and power of a matrix by caley Hamilton theorem		
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	16-09-2019	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	05-10-2019	
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

26	Introduction		
27	Method – 1: Bisection method		
28	Problems		
30	Method – 2: Regula falsi method	From:	
31	Problems	07-10-2019	
33	Method – 3: Iteration method	To:	
34	Problems	19-10-2019 &	Lecture interspersed with discussions
35	Method – 4: Newton Raphson method		
36	Problems	From:	
37	Newton Raphson method simultaneous equations	28-10-2019	
38	Gauss Jacobi Method	То:	
39	Gauss Seidal Method	09-11 - 2019	
40	problems		

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		
43	Problems		
44	Newton's Backward interpolation formula		Lecture
45	Problems	From:	interspersed with
46	Gauss Forward interpolation formula – Problems	11-11-2019	discussions
47	Problems	To:	
48	Gauss Backward interpolation formula – Problems	30-11-2019	
49	Problems		
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	publications	
54	Simpson's 1/3 rule		
55	Problems	+	
56	Simpson's 3/8 rule		
57	Taylor's series method		
58	Problems	From	Lecture
59	Picard's method of successive approximation	04-05-2020	interspersed
60	Euler's method	To 23-05-2020	with discussions
61	Euler's modified method	1	
62	Problems		
63	Runge kutta method		
64	Problems	-	

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PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1203

Section : ECE	A Date:	Page No	o: 01 of 04
Revision No : 00	Prepared By: B.V.RAMA KRISHNA RAC	Approv	ed By: HOL
Tools: Black bo	ard		
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT - I: VEC	TOR CALCULUS		
CO1: To interp	retthephysical		
neaningofdiffe	rentoperatorssuchasgradient, curlanddivergence, to)	
estimatethewor	kdoneagainstafield, circulationandfluxusingvectorca	alculus	
ΓB:" Engineeri	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand pu	blications	
1	Vector Differentiation:Introduction		
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		Lecture interspersed with discussions
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities	From:	
. 10	Vector identities .	6/2/2020	
11	Problems on application of gradient	To	discussions
12	Problems on divergence and curl	25/2/2020	
13	Vector Integration: Introduction		
14	Problems on line integral		v. Prince
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		
JNIT – II: LAPI	LACE TRANSFORMS		
CO2: To applyt	heLaplacetransformfor solvingdifferentialequations		
B:" Engineeri	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand pu	blications	
22	Laplace Transforms: Definitions, Existence		
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties		
	Change of scale property	From	Lecture
25	Laplace Transforms of derivatives; Integrals	26/2/2020	intersperse
26		To	with
27	$L(t^n f(t))$	11/3/2020	discussions
	Laplace Transforms of division by t		
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions	
30	Inverse Laplace Transforms: Finding L^{-1} using partial fractions	
31	Properties of inverse transform	
32	Convolution theorem	
33	Solutions of Difference Equations	

UNIT - III: FOURIER SERIES AND FOURIER TRANSFORMS

CO3:TO find or compute the Fourier series of periodic signals , able to apply integral expressions for the forwards and inverse Fourier transform to a range of non-periodic waveforms and the following periodic series of the follo

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

	8		
34	Introduction		
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions	From	Lecture
39	Change of interval	12/3/2020	interspersed
40	Half range sine and cosine series	To	with
41	Fourier transforms	11/4/2020	discussions
42	Fourier integral theorem		discussions
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		

UNIT - IV: PDE OF FIRST ORDER

 $CO4: To\ identify solution methods for partial differential equations that model physical processes$

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

	8		
48	Introduction		10%
49	Formation of PDE by eliminating arbitrary		
	constants		
50	Formation of PDE by eliminating arbitrary		
	functions		
51	Solutions of PDE	From	Lecture interspersed with discussions
52	Method of grouping	12/3/2020	
53	Method of multipliers	To	
54	Nonlinear PDE $f(p,q) = 0$	11/4/2020	
55	Nonlinear PDE $f(p, q, z) = 0$		
56	Nonlinear PDE $f(p, x) = g(q, y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n) = 0$		
60	$f(pz^m, qz^m) = 0$		

UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS CO5:

TB:" Engine	ering Mathematics", Dr. T.K.V.Iyengar; S.Chand J	publications	
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From	Lecture
62	$\sin(ax + by)$; $\cos(ax + by)$	27/4/2020 To 7/5/2020	interspersed with discussions
63	$x^m y^n$		
64	Method of separation of variables		
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

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PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

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TENTATIVE LESSON PLAN: R19BS1203

	ATHEMATICS - III		
Section : ECE			: 01 of 04
Revision No : 00		Approv	ed By: HOD
Tools: Black bo		T 5.	1 36 3 6
No. of Periods	TOPIC	Date	Mode of Delivery
	TOR CALCULUS		
CO1: To interp			
	rentoperatorssuchasgradient, curland divergence		
	kdoneagainstafield, circulationandfluxusingvect		
TB:" Engineeri	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand	publications	
1	Vector Differentiation:Introduction		
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		Lecture
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient	From:	interspersed
9	Vector identities		with discussions
. 10	Vector identities .	6/2/2020	
11	Problems on application of gradient	To	
12	Problems on divergence and curl	25/2/2020	
13	Vector Integration: Introduction	_	
14	Problems on line integral	4	
15	Problems on line integral		
16	Problems on surface integrals	4	
17	Problems on volume integrals		
18	Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem	4	
21	Problems on stokes theorem		
	LACE TRANSFORMS		
CO2: To applyt	heLaplacetransformfor solvingdifferentialequati	ons	
	ng Mathematics", Dr. T.K.V.Iyengar; S.Chand	publications	
22	Laplace Transforms: Definitions, Existence		
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties		
	Change of scale property	From	Lecture
25	Laplace Transforms of derivatives; Integrals	26/2/2020	interspersed
26	$L(t^n f(t))$	То	with
27	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	11/3/2020	discussions
	Laplace Transforms of division by t	_	
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions	
30	Inverse Laplace Transforms: Finding L^{-1} using partial fractions	
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UNIT - III: FOURIER SERIES AND FOURIER TRANSFORMS

CO3:TO findorcomputetheFourierseriesofperiodicsignals ,abletoapply integral expressionsfor theforwardsandinverseFouriertransformtoarangeofnon-periodicwaveforms

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

34	Introduction		
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions	From	Lecture
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40	Half range sine and cosine series	То	with
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43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		

UNIT – IV: PDE OF FIRST ORDER

 $CO4: To\ identify solution methods for partial differential equations that model physical processes$

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

	<u> </u>		
48	Introduction		
49	Formation of PDE by eliminating arbitrary		
	constants		
50	Formation of PDE by eliminating arbitrary		
	functions		
51	Solutions of PDE	From	
52	Method of grouping	12/3/2020	Lecture interspersed with discussions
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62	$\sin(ax + by); \cos(ax + by)$	27/4/2020	interspersed
63	$x^m y^n$	To 7/5/2020	with
64	Method of separation of variables		discussions
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

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PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108 TENTATIVE LESSON PLAN: R19 BS 1204

Course Title: Applied Physics Section : ECE A Date: 04.02.2020 Page No Revision No: 00 Prepared By: M.Vidya Elizabeth Approve Tools: No: of Periods UNIT -I UNIT- I WAVE OPTICS CO1: Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments. 1 Introduction, Principle of Super Position 08/02/20 2 Interference of light, Conditions for Sustained Interference 3 Interference in thin films 4 Newton Rings 5 Newton Rings, Problems 6 Diffraction-Fraunhofer diffraction. 7 Diffraction due to single slit 8 Double slit, N-Slit 9 Circular aperture, Intensity distribution curves 10 Rayleigh Criterion 11 Diffraction Grating 12 Resolving Power of Telescope, Grating 13 RP OF Microscope 14 Problems UNIT II QUANYUM MECHANICS: CO2: Explain the fundamental concepts of quantum mechanics. Analyze the physical significance of wave function and apply the Schrodinger wave equation for energy values of free particle. 15 Introduction, Mater waves. De Broglie waves 07/03/20 16 Davison and German expt, To 17 G.P.Thomson expt, To 18 Hessenberg uncertainty principle 19 Schrodinger time dependent wave equation 20 Schrodinger time dependent wave equation 21 Particle in a box 22 Problems	Mode of Delivery Lecture interspers with discussion
Revision No :00 Prepared By : M.Vidya Elizabeth Tools: No. of Periods UNIT -I UNIT- I WAVE OPTICS CO1: Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments. I Introduction, Principle of Super Position 08/02/20 Interference of light, Conditions for Sustained Interference in thin films Newton Rings Newton Rings, Problems Source of Diffraction-Fraunhofer diffraction. Diffraction due to single slit Double slit, N-Slit Circular aperture, Intensity distribution curves Resolving Power of Telescope, Grating RP OF Microscope Resolving Power of Telescope, Grating RP OF Microscope UNIT II QUANYUM MECHÂNICS: CO2: Explain the fundamental concepts of quantum mechanics. Analyze the physical significance of wave function and apply the Schrodinger wave equation for energy values of free particle. Introduction, Mater waves. De Broglie waves Introduction, Mater waves. De Broglie waves Schrodinger time dependent wave equation Schrodinger time dependent wave equation Schrodinger time dependent wave equation Schrodinger time independent wave equation Schrodinger time independent wave equation	Mode of Delivery Lecture interspers with
Tools: No. of Periods	Mode of Delivery Lecture interspers with
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power of various optical instruments. 1	with
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21 Particle in a box	
1 22 11100161115	Lecture
	intersperse
BAND THEORY OF SOLIDS	with
CO3:Analyze the effect of temperature on Fermi-Dirac	discussion
distribution function and summarize various types of	CIDC COOTOL
solids based on band theory, electron theory in the study	
of electrical conductivity.	
23 Classical free electron theory, merits and demerits 15/03/20	
24 Quantum free electron theory To	
25 Fermi Dirac distribution function and its temperature	
dependence 13/04/20	
26 Fermi energy, Density of states Fermi energy Density	of states :
27 Blochs theorem, Kronig penney model 7 Bouasta orem Reb	ange de range e rame op met e representation
28 wrong penney model	i manca in
Kronig penney model	Toanca in

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29	Energy bands- Classification of materials		
30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems		
UNIT-IV:	SEMICONDUCTUR PHYSICS		Lecture
	CO4: Classify the energy bands of semiconductors, out	The state of the s	interspersed
	line the properties of N and P type semiconductors and		with
	identify the type of semiconductor using Hall effect.		discussions
33	Introduction-Intrinsic semiconductor		
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
36	p-type and n-type-density of charge carriers	15/04/20	
37 .	Dependence of Fermi energy on carrier concentration and	To	
38	temperature, Hall effect,	04/05/20	
39	Hall co-efficient, Applications of Hall effect	04/03/20	
40	Drift and diffusion currents		Lecture
41	Einstein's Equation		interspersed
42	Problems		with
UNIT- V	MAGNETISM & DIELECTRICS		discussions
<u> </u>	CO5: Explain the applications of dielectric and		and a state of the first of the second second of the second secon
	magnetic materials and apply the concept of magnetism		
	to magnetic devices.		
43	MAGNETISM: Introduction	06/05/20	
44	Magnetic dipole momentum, Magnetization-	То	
45	Magnetic susceptibility and permeability		
46	Origin of permanent magnetic moment	13/05/20	
47	Bohr Magneton -Classification of magnetic materials		
	(Dia, Para and Ferro)		Lecture
48	Soft and hard magnetic materials		interspersed
49	Applications of Ferromagnetic material		with
50	Problems		discussions
51	DIELECTRICS: Introduction,		
52	Dielectric polarization		
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic		
)	(Quantitative),		•
55	Orientation polarizations	14/05/20	
56	Lorentz internal field	То	
57	Claussius Mossoti equation-	25/05/20	
58	Entrinsic SC's		
59	Drift & Diffusion		
60	Einstein's Equation		
61	Hall Effect & Problems		

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SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

	ECE B Date: 04.02.2020	Page N	0.00
Revision N	0:00 Prepared By: M.Vidya Elizabeth		ed By: HO
Tools:		* 1 - 1	A - V
No. of Periods	TOPIC	DATE	Mode o Deliver
UNIT -I	UNIT- I WAVE OPTICS		Z GAT GI
	CO1: Analyze the differences between interference		
	and diffraction with applications. And illustrate the		Lecture
	resolving power of various optical instruments.		interspers
1	Introduction, Principle of Super Position	0.6/00/20	with
2	Interference of light, Conditions for Sustained	06/02/20	discussio
2	Interference of right, Conditions for Sustained	To	
3	Interference in thin films	06/03/20	
4	Newton Rings		
. 5	Newton Rings, Problems	-	
6	Diffraction-Fraunhofer diffraction.	-	
7	Diffraction-Fraumorer diffraction. Diffraction due to single slit		
- 8	Double slit, N-Slit		in and the production of the
9	Circular aperture, Intensity distribution curves		
10	Rayleigh Criterion	4	
11	Diffraction Grating	4	
12	Resolving Power of Telescope, Grating	_	.
13	RP OF Microscope	4	Lecture
14	Problems	-	intersperse
UNIT II	QUANYUM MECHANICS:		with
OINII II	CO2: Explain the fundamental concepts of quantum		discussion
	mechanics. Analyze the physical significance of wave		
	function and apply the Schrodinger wave equation for		
	energy values of free particle.		
15	Introduction, Mater waves. De Broglie waves	07/02/20	
16	Davison and German expt,	07/03/20	
17	G.P. Thomson expt,	To 14/03/20	
18	Hesenberg uncertainty principle	- 14/03/20 -	
19	Schrodinger time dependent wave equation	+	
20	Schrodinger time independent wave equation	+	
21	Particle in a box		
22	Problems		Т
JNIT-III	CLASICAL FREE ELECTRON THEORY AND		Lecture
	BAND THEORY OF SOLIDS		intersperse with
	CO3:Analyze the effect of temperature on Fermi-Dirac		discussion
	distribution function and summarize various types of		G12CG2210II
	solids based on band theory. electron theory in the study		
	of electrical conductivity.		
23	Classical free electron theory, merits and demerits	15/03/20	
24	Quantum free electron theory	To	
25	Fermi Dirac distribution function and its temperature	10	
	dependendence	13/04/20	
26	Fermi energy, Density of states	13/04/20	
27	Blochs theorem, Kronig penney model	r in the about the way of	
28	Kronig penney model		
29	Energy bands- Classification of materials		

29	Energy bands- Classification of materials	The Secret	
30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems	And the state of t	
UNIT-IV:	SEMICONDUCTUR PHYSICS		Lecture
	CO4: Classify the energy bands of semiconductors, out	T MAIL TO ETT.	interspersed-
	line the properties of N and P type semiconductors and		with
	identify the type of semiconductor using Hall effect.		discussions
33	Introduction-Intrinsic semiconductor		
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
36	p-type and n-type-density of charge carriers		
37	Dependence of Fermi energy on carrier concentration and	15/04/20	
38	temperature, Hall effect,	То	
39	Hall co-efficient, Applications of Hall effect	04/05/20	
40	Drift and diffusion currents		Lecture
41	Einstein's Equation		interspersed
42	Problems		with
UNIT- V	MAGNETISM & DIELECTRICS		discussions
	CO5: Explain the applications of dielectric and		
	magnetic materials and apply the concept of magnetism		
	to magnetic devices.		
43	MAGNETISM: Introduction	06/05/20	
44	Magnetic dipole momentum, Magnetization-	To	
45	Magnetic susceptibility and permeability		
. 46	Origin of permanent magnetic moment	13/05/20	
_47	Bohr Magneton -Classification of magnetic materials		
	(Dia, Para and Ferro)		Lecture
48	Soft and hard magnetic materials		interspersed
49	Applications of Ferromagnetic material		with
50	Problems		discussions
51	DIELECTRICS: Introduction.		
52	Dielectric polarization	*	
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic		
	(Quantitative),		
55	Orientation polarizations	14/05/20	
56	Lorentz internal field	To	
57	Claussius Mossoti equation-	25/05/20	
58	Entrinsic SC's	23/03/20	
59	Drift & Diffusion		
60	Einstein's Equation		
61	Hall Effect & Problems		

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TENTATIVE LESSON PLAN: R19ES1209

	itle: NETWORK ANALYSIS (
Section:	Date:06-02-2020	Page No: 1 of 3 Approved by :HOD	
Revision No:	Prepared by : P.RAVEENDRA		
	ack board, PPTs		
No.of periods	Topics	Date	Mode of Delivery
CO1 : Ga ΓΒ:: Netv ΓΒ:: Netv	ntroduction to Electrical Circuits in the knowledge on basic network elements. vork Analysis – ME Van Valkenburg, Prentice Hall of I vork Analysis by K.Satya Prasad and S Sivanagaraju, C nalysis by Hayt and Kimmarle, TMH	ndia, 3rd Editio Cengage Learnii	on, 2000 1g. TB::Electric
1	Network elements classification	6/2/2020	T
2	Electric charge, current, energy and potential	7/2/2020	
3	Electric charge, current, energy and potential	10/2/2020	
4	Resistance parameter - series and parallel combination	10//2020	-
5	Inductance parameter -series and parallel combination	11/2/2020	+
6	Capacitance parameter-series and parallel combination	11/2/2020	1
7	Energy sources: Ideal, Non-ideal	12/2/2020	1
8	Independent and dependent sources	12/2/2020	1
9	Source transformation	13/2/2020	1
10	Kirchoff's laws	13/2/2020	1
11	Mesh analysis and Nodal analysis problem solving	13/2/2020	1
10	, and the second	10,11,12,	1
12	Mesh analysis and Nodal analysis problem solving	13/2/2020	
	A.C Fundamentals and Network Topology	14/2/2020	Lecture
13	Definitions of terms associated with periodic functions	14/2/2020	interspersed
14	Time period, Angular velocity and frequency	17/2/2020	with discussion
15	RMS value, Average value, Form factor and peak factor	17/2/2020	
16	RMS value, Average value, Form factor and peak factor	18/2/2020	
17	problem solving	18/2/2020	
18	problem solving	19/2/2020	
19	Phase angle, Phasor representation	24/2/2020	
20	Addition and subtraction of phasors	25/2/2020	
21	mathematical representation of sinusoidal quantities	25/2/2020	
22	explanation with relevant theory, problem solving	26/2/2020	
23	explanation with relevant theory, problem solving	26/2/2020	
24	Principal of Duality with examples	27/2/2020	
25	Definitions of branch, node, tree	27/2/2020	
26	planar, non-planar graph, incidence matrix	28/2/2020	
		201212020	

52	Milliman's, Reciprocity, Tellegens	21,22/4/202	
53	Milliman's, Reciprocity, Tellegens	23,24/4/202	And the state of the same
54	Compensation, Substitution	27/4/2020	
55	Superposition, Max Power Transfer	28,29/4/202	Lecture interspersed
56	Superposition, Max Power Transfer	30/4/2020,4/ 5/2020	with discussions
57	problem solving using dependent sources also	4,5/5/2020	
58	problem solving using dependent sources also	6,7/5/2020	
59	problem solving using dependent sources also	8/5/2020	
60	problem solving using dependent sources also	8/5/2020	

UNIT-V:Two-port networks

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

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	11/5/2020	
62		12,13/5/202	
	Z-parameters, Y- parameters	0	
63		14,15/5/202	
	Transmission line parameters, h-parameters	0	
64	Inverse h- parameters	18/5/2020	
65		18,19/5/202	
03	Inverse Transmission line parameters	0	
66	Relationship between parameter sets	20/5/2020	Lecture
67		21,22/5/202	interspersed
07	Parallel connection of two port networks	0	with discussions
68		21,22/5/202	
00	Cascading of two port networks	0	
69		21,22/5/202	
09	series connection of two port networks	0	
70		21,22/5/202	
70	problem solving including dependent sources also	0	
71		21,22/5/202	
/1	problem solving including dependent sources also	0	

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TENTATIVE LESSON PLAN: R19ES1209

Section: B	Date:06-02-2020	Page No: 1	of 3
Revision No:	Prepared by : P.RAVEENDRA	Approved b	y :HOD
Tools: B	ack board, PPTs		
No.of periods	Topics	Date	Mode of Delivery
CO1 : Ga	ntroduction to Electrical Circuits in the knowledge on basic network elements. vork Analysis – ME Van Valkenburg, Prentice Hall of In	ndia. 3rd Editic	on. 2000
TB:: Netv	vork Analysis by K.Satya Prasad and S Sivanagaraju, C	engage Learnii	ng. TB::Electric
Circuit A	nalysis by Hayt and Kimmarle, TMH		
1	Network elements classification	6/2/2020	T .
2	Electric charge, current, energy and potential	7/2/2020	
3	Electric charge, current, energy and potential	10/2/2020	
4	Resistance parameter - series and parallel combination	10//2020	1
5	Inductance parameter -series and parallel combination	11/2/2020	
6	Capacitance parameter-series and parallel combination	11/2/2020	+
7	Energy sources: Ideal, Non-ideal	12/2/2020	-
8	Independent and dependent sources	12/2/2020	
9	Source transformation	13/2/2020	
10	Kirchoff's laws	13/2/2020	†
11	Mesh analysis and Nodal analysis problem solving	13/2/2020	1
10	· · · · · · · ·	10,11,12,	1
12	Mesh analysis and Nodal analysis problem solving	13/2/2020	
	A.C Fundamentals and Network Topology	14/2/2020	Lecture
13	Definitions of terms associated with periodic functions	14/2/2020	interspersed
14	Time period, Angular velocity and frequency	17/2/2020	with discussion
15	RMS value, Average value, Form factor and peak factor	17/2/2020	1
16	RMS value, Average value, Form factor and peak factor	18/2/2020	
17	problem solving	18/2/2020	
18	problem solving	19/2/2020	
19	Phase angle, Phasor representation	24/2/2020	
20	Addition and subtraction of phasors	25/2/2020	
21	mathematical representation of sinusoidal quantities	25/2/2020	1
22	explanation with relevant theory, problem solving	26/2/2020	1
23	explanation with relevant theory, problem solving	26/2/2020	
24	Principal of Duality with examples	27/2/2020	
25	Definitions of branch, node, tree	27/2/2020	
26	planar, non-planar graph, incidence matrix	28/2/2020	
27	basic tie set schedule, basic cut set schedule	28/2/2020	

UNIT-II: Transients:	

CO2: Analyze the filter design concepts in real world applications.

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

28	First order differential equations	2/3/2020	
29	Definition of time constants	3/3/2020	
30	R-L circuit, R-C circuit with DC excitation	4/3/2020	
31	R-L circuit, R-C circuit with DC excitation	5/3/2020	
32	Evaluating initial conditions procedure	6/3/2020	Lecture
33	second order differential equations	9/3/2020	interspersed
34	homogeneous, non-homogenous	9/3/2020	with discussions
35		11,12/3/202	
33	problem solving using RLC elements with DC excitation	0	
36	problem solving using RLC elements with AC excitation	13/3/2020	
37	Response as related to s-plane rotation of roots	13/3/2020	

UNIT-III: Coupled Circuits

CO3: Analyze the performance of periodic waveforms.

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

38	Self inductance, Mutual inductance	16/3/2020	
39	Coefficient of coupling, analysis of coupled circuits	16/3/2020	
. 40	Natural current, Dot rule of coupled circuits	17/3/2020	
41	Conductively coupled equivalent circuits	18/3/2020	
42	problem solving	19/3/2020	
43	Resonance: Introduction	20/3/2020	
44	Definition of Q, Series resonance	30/3/2020	
45		31/3/2020,1/	T4
43	Bandwidth of series resonance, Parallel resonance	4/2020	Lecture
46	Condition for maximum impedance	3/4/2020	interspersed
47		6,7,8,9/4/20	with discussions
47	current in anti resonance	20	
48		13,15,16,17/	
40	Bandwidth of parallel resonance	4/2020	
49		13,15,16,17/	
49	general case- resistance present in both branches	4/2020	
50		13,15,16,17/	
30	anti resonance at all frequencies	4/2020	

UNIT-IV: Network Theorems:

CO4: To Understand the Network Theorems.

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

51	Thevinin's, Norton's	20/4/2020
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TENTATIVE LESSON PLAN:ES1211

Course Title: B	ASIC ELECTRICAL ENGINEERING	A SECTION AND A SECTION ASSESSMENT
	Date: 06/02/2020	Page No: 1 of 2
Section :A	DATE: 00/04/2020	Approved by :HOD
Revision No:	Prepared by B.INDRAJA	1

100is . Black board, 11			Mode of
No.of periods	Topics	Date	Delivery
	*		

UNIT-I DC Machines

CO1 :Students are able to explain the operation of DC generator and analyze the characteristics of DC generator and the principle of operation, characteristics of DC motor. Methods of starting and speed control methods of DCmotors.

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

1	Introduction	06-02-2020	
2	Principle of operation of DC generator	07-02-2020	
3	emf equation	10-02-2020	
4,5,6,7	types of DC machines	10,11,12, 13-2-2020	
8	torque equation of DC motor	14-02-2020	
9	applications	17-02-2020	Lecture
10	three point starter	17-02-2020	interspersed
11	losses and efficiency	18-02-2020	with discussions
12	swinburne's test	19-02-2020	
13,14	speed control methods	24-02-2020	
15	OCC of DC generator	25-02-2020	
16	Brake test on DC Shunt motor	26-02-2020	
17	Numerical problems	27-02-2020	
18	tutorial	28-02-2020	

UNIT-II Transformers

CO2: Students are ableto learn the constructional details, principle of operation and performance of transformers.

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

19	Introduction	02-03-2020	
20	Principle of operation of single phase transformer	02-03-2020	
21	constructional features	03-03-2020	
22	EMF equation	04-03-2020	Lecture
23	Losses and efficiency of	05-03-2020	interspersed
24	transformer regulation of transformer	06-03-2020	with discussions
25	OC & SC tests predetermination of efficiency and	09-03-2020	
26	Sumpner's test	09-03-2020	
27,28	Numerical Problems	11,12-3-2020	
29	tutorial	13-03-2020	

UNIT-III Synchronous Generators & Motors

CO3: Students are able to analyze the performance and speed – torque characteristics of a 3-phase induction motor and understand starting methods of 3-phase inductionmotor.

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

	Introduction		
30	1	16-03-2020	
	Principle of operation and construction of alternators		
31		16-03-2020	
32	concept of phase angle and phase difference	17-03-2020	
33	types of alternators	18-03-2020	
	Regulation of alternator by synchronous impedance method		Lecture
34		19-03-2020	intersperse
35	EMF equation of three phase alternator	20-03-2020	with
36,37	Construction of three phase synchronous motor	30-03-2020	discussions
38,39	operating principle	31-3-2020,1-4-2020	
40	equivalent circuit of synchronous motor	03-04-2020	
	Numerical Problems		
41,42,43,44,45		6,7,8,9-4-2020	
	tutorial		
46,47,48,49,50		13,15,16,17-4-2020	

UNIT-IV Induction Machine

CO4: Students are able to explain the operation of Synchronous Machines

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

51,52	Introduction	20-04-2020	
53,54	Principle of operation and construction of three-phase induction motors	21,22-4-2020	Lecture
55,56	slip ring and squirrel cage motors	23,24-4-2020	intersperse
57,58	slip-torque characteristics	27-04-2020	with
59,60	efficiency calculation	28,29-4-2020	discussion
61,62	starting methods	30-4-2020,4-5-2020	discussion
63,64	Brake test on 3-Phase Induction Motor	4,5-5-2020	
65,66	Numerical problems	6,7-5-2020	
67	tutorial	08-05-2020	

UNIT-V Special Machines

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

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

68,69	Introduction	11-05-2020	
70,71	Principle of operation and construction	12,13-5-2020	Lastura
72,73	single phase induction motor	14,15-5-2020	Lecture
74	shaded pole motors	18-05-2020	interspersed
75,76	capacitor motors	18,19-5-2020	with
77	AC servomotor	20-05-2020	discussions
78,79	tutorial	21,22-5-2020	

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Revision No: Prepared by: T.Maha lakshmi Approved by: HOD Tools: Black board, PPTs No. of periods Topics Topics Date Mode Delive CO1 :Students are able to explain the operation of DC generator and analyze the characteristics of DC generator BE: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications Principle of operation of DC generator Principles of DC machines 1 Principle of operation of DC generator 2,3 emf equation 7/2/2020 4 types of DC machines 10/2/2020 5,6 torque equation of DC motor 7 applications 8 three point starter 9 losses and efficiency 11,12 speed control methods 13 OCC of DC generator 14 Brake test on DC Shunt motor 14 Brake test on DC Shunt motor 25 Students are ableto explain the principle of operation of DC motor and analyze their characteristics. Acquires skills to analyze the starting and speed control methods of DCmotors Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications 16,17 Principle of operation of single phase transformer. 26/2/2020 21,22 Losses and efficiency of 4/3/2020 21,22 Losses and efficiency of 4/3/2020 21,22 Losses and efficiency of 4/3/2020 Approved by : Hoto		Date: 6/2/2020		
No.of periods Topics Date Mode Delive Topics Date Mode Delive Topics Topics Date Mode Delive Topics Description Topics Description Topics Topics Description Topics Description Topics Description Topics Topics Description Topics Topics Description Topics Description Topics Topics Description Topics Topics Topics Topics Topics Description Topics Topi		Prepared by : T.Maha lakshmi	Page No: 1 of	3
UNIT-I DC Machines CO1 :Students are able to explain the operation of DC generator and analyze the characteristics of DC generator I Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications Principles of DC machines 1 Principle of operation of DC generator 2,3 emf equation 7/12/2020 4 types of DC machines 5,6 torque equation of DC motor 7 applications 13/2/2020 8 three point starter 9 losses and efficiency 10 swinburne's test 11,12 speed control methods 11,12 speed control methods 11,12 speed control methods 12/2/2020 13 OCC of DC generator 20/2/2020 14 Brake test on DC Shunt motor 20/2/2020 15 numerical problems 22-tstudents are ableto explain the principle of operation of DC motor and analyze their characteristics. Acquire skills to analyze the starting and speed control methods of DCmotors Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications 16,17 Principle of operation of single phase transformer. 26/2/2020 20 EMF equation 21,22 Losses and efficiency of 23,24,25 transformer regulation of transformer 26,27 27 28,29 Sumpner's test 11/3/2020 Sumpner's test	Tools: Black bo	ard, PPTs	Approved by	:HOD
CO1 :Students are able to explain the operation of DC generator and analyze the characteristics of DC generator 1		Topics	Date	Mode
Principle of operation of DC generator	UNIT-I DC Ma	chines		Delive
2,3 emf equation 7/2/2020 4 types of DC machines 10/2/2020 5,6 torque equation of DC motor 12/2/2020 7 applications 13/2/2020 8 three point starter 14/2/2020 10 swinburne's test 17/2/2020 11,12 speed control methods 19/2/2020 13 OCC of DC generator 20/2/2020 14 Brake test on DC Shunt motor 24/2/2020 15 numerical problems 26/2/2020 IT-II Transformers 2: Students are ableto explain the principle of operation of DC motor and analyze their characteristics. Acquire skills to analyze the starting and speed control methods of DCmotors: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications 16,17 Principle of operation of single phase transformer. 26/2/2020 28,29 Sumpner's test 11/3/2020 28,29 Sumpner's test 11/3/2020 Sumpner's test 11/3/2020 29,20 EMF equation 21/3/2020 20 EMF equation 97/3/2020 20 EMF equation 97/3/2020 21/3/2020 21/3/2020 22/3/2020 23,24,25 Sumpner's test 11/3/2020 24,29 Sumpner's test 11/3/2020	TB:: Principles o		e characteristics o dications	of DC generato
2,3 cm equation 7/2/2020	1	Principle of operation of DC generator		
torque equation of DC motor applications three point starter losses and efficiency swinburne's test 11,12 speed control methods OCC of DC generator skills to analyze the starting and speed control methods of DCmotors reprinciples of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications East Principles of SC tests predetermination of efficiency and regulations 26,27 OC & SC tests predetermination of efficiency and regulations 11/3/2020 Lecture interspers with discussion 14/2/2020 14/2/2020 17-II Transformers 2-5/2/2020 2-6/2/2020 2	2,3	emf equation	6/2/2020	
applications 12/2/2020 13/2/2020 14/2/2020 10 swinburne's test 11/2/2020 10 swinburne's test 11/12 speed control methods 19/2/2020 13 OCC of DC generator 20/2/2020 14 Brake test on DC Shunt motor 24/2/2020 15 numerical problems 17-II Transformers 2:Students are ableto explain the principle of operation of DC motor and analyze their characteristics. Acquires skills to analyze the starting and speed control methods of DCmotors: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications 16,17 Principle of operation of single phase transformer. 26/2/2020 20 EMF equation 21,22 Losses and efficiency of 4/3/2020 21,22 Losses and efficiency of 5/3/2020 21,22 Losses and efficiency of 4/3/2020 22,24,25 CC & SC tests predetermination of efficiency and regulations 9/3/2020, 11/3/2020 28,29 Sumpner's test Lecture interspersed with discussions	4	types of DC machines	7/2/2020	
three point starter 13/2/2020 13/2/2020 14/2/2020 14/2/2020 10 swinburne's test 11,12 speed control methods 19/2/2020 13 OCC of DC generator 20/2/2020 14 Brake test on DC Shunt motor 15 numerical problems 2:Students are ableto explain the principle of operation of DC motor and analyze their characteristics. Acquire skills to analyze the starting and speed control methods of DCmotors Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications 16,17 Principle of operation of single phase transformer. 26/2/2020 27/2/2020 28,19 Constructional features 28,2/2020 20 EMF equation 21,22 Losses and efficiency of 26,27 OC & SC tests predetermination of efficiency and regulations 9/3/2020, 11/3/2020 28,29 Sumpner's test Lecture interspersed with discussions	5,6	torque equation of DC motor	10/2/2020	
three point starter 13/2/2020 losses and efficiency 14/2/2020 10 swinburne's test 11,12 speed control methods 13/2/2020 13 OCC of DC generator 14 Brake test on DC Shunt motor 15 numerical problems 17-11 Transformers 2. Students are ableto explain the principle of operation of DC motor and analyze their characteristics. Acquire skills to analyze the starting and speed control methods of DCmotors Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications 16,17 Principle of operation of single phase transformer. 26/2/2020 27/2/2020 28/2/2020 EMF equation 20 EMF equation 21,22 Losses and efficiency of transformer regulation of transformer 26,27 OC & SC tests predetermination of efficiency and regulations 9/3/2020, 11/3/2020 28,29 Sumpner's test Lecture intersperse with discussions			12/2/2020	
9 losses and efficiency 10 swinburne's test 11,12 speed control methods 13 OCC of DC generator 20/2/2020 14 Brake test on DC Shunt motor 24/2/2020 15 numerical problems 26/2/2020 27/2020 27/2020 28,29 28,29 Sumpner's test 11/3/2020 28,29 Sumpner's test 11/3/2020 11/3/2020 11/3/2020 11/3/2020 11/3/2020 11/3/2020 11/3/2020 11/3/2020 11/3/2020 11/3/2020 11/3/2020 11/3/2020 11/3/2020 28,29 Sumpner's test			13/2/2020	Lecture
swinburne's test 11,12 speed control methods 17/2/2020 13 OCC of DC generator 20/2/2020 14 Brake test on DC Shunt motor 24/2/2020 15 numerical problems 26/2/2020 17-II Transformers 2 Students are ableto explain the principle of operation of DC motor and analyze their characteristics. Acquire skills to analyze the starting and speed control methods of DCmotors Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications 16,17 Principle of operation of single phase transformer. 26/2/2020 28/2/2020 28/2/2020 28/2/2020 29 EMF equation 20 EMF equation 21,22 Losses and efficiency of transformer regulation of transformer 26,27 OC & SC tests predetermination of efficiency and regulations 28,29 Sumpner's test 11/3/2020 Sumpner's test			14/2/2020	interspers
11,12 speed control methods 13 OCC of DC generator 20/2/2020 14 Brake test on DC Shunt motor 24/2/2020 15 numerical problems 26/2/2020 27-2020 28/2/2020 28,29 28,29 Sumpner's test 17/2/2020 19/2/2020 19/2/2020 20/2/				
13 OCC of DC generator 14 Brake test on DC Shunt motor 15 numerical problems 16/2/2020 IT-II Transformers 2 Students are ableto explain the principle of operation of DC motor and analyze their characteristics. Acquired skills to analyze the starting and speed control methods of DC motors 2 Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications 16,17 Principle of operation of single phase transformer. 26/2/2020 27/2/2020 28/2/2020 28/2/2020 29 EMF equation 20 C & SC tests predetermination of efficiency and regulations 26/3/2020 with discussions 26/27 26/27 27/2/2020		swinburne's test		-
Brake test on DC Shunt motor 15 numerical problems 24/2/2020 IT-II Transformers 2 :Students are ableto explain the principle of operation of DC motor and analyze their characteristics. Acquires skills to analyze the starting and speed control methods of DCmotors Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications 16,17 Principle of operation of single phase transformer. 26/2/2020 18,19 constructional features 20 EMF equation 21,22 Losses and efficiency of 4/3/2020 21,22 Losses and efficiency of 5/3/2020 23,24,25 CC & SC tests predetermination of efficiency and regulations 9/3/2020, with discussions 11/3/2020 28,29 Sumpner's test 11/3/2020				
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28,29 Sumpner's test 11/3/2020 11/3/2020	26,27	& SC tests predetermination of efficiency and regulations		
11/3/2020	28.20 Su	mpner's test	11/3/2020	
30 Numerical Problems 12/3/2020	28,29	mphor 3 test	11/3/2020	
		[2] [1] 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		

UNIT-III Synchi	onous Generators & Motors
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CO3 :Students are able to analyze the performance and speed – torque characteristics of a 3-phase induction motor and understand starting methods of 3-phase inductionmotor.

TB:: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications

	Principle of operation and construction of alternators		*** *** **
31,32	or operation and construction of alternators	13/3/2020	
33,34	concept of the	16/3/2020	
33,34	concept of phase angle and phase difference	18/3/2020	
35,36,37,38	types of alternators	19/3/2020	
		20/3/2020	
39,40	Regulation of alternator by synchronous impedance method	30/3/2020	Lecture
	Th C	1/4/2020	interspersed
41, 42	EMF equation of three phase alternator	1/4/2020	with
12		2/4/2020	discussions
43	Construction of three phase synchronous motor .	3/4/2020	
44,45	operating principle	6/4/2020,	
		8/4/2020	
46,47	equivalent circuit of synchronous motor	8/4/2020	
		9/4/2020	

UNIT-IV Induction Machine

CO4: Students are able to explain the operation of SynchronousMachines

TB :: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications

48, 49, 50	Principle of operation and construction of three-phase induction motors	13/4/2020	
51, 52	slip ring and squirrel cage motors	15/4/2020 16/4/2020	
53,54	slip-torque characteristics	17/4/2020 20/4/2020	Lecture
55,56	efficiency calculation	22/4/2020 23/4/2020	interspersed
57,58	starting methods	24/4/2020 27/4/2020	discussions
59, 60	Brake test on 3-Phase Induction Motor	29/4/2020 30/4/2020	
		4/5/2020	

UNIT-V Special Machines

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

TB :: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications

61,62,63	Principle of operation and construction	6/5/2020	Ι
		7/5/2020	
64,65	single phase induction motor	8/5/2020	
		11/5/2020	
66,67	shaded pole motors	13/5/2020	Lecture
	oomooitet	14/5/2020	interspers
68,69	capacitor motors	15/5/2020	with
ent for Leaver (a tradition to a power	er manager sage eventrale er i til er en er en en en en en er en	18/5/2020	discussion

AC servomotor 20/5/2020 21/5/2020 23/5/2020

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PRINCIPAL SRK Institute of Technology ENIKEPADU, VIJAYAWADA-521 108

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE STRUCTURE - R19

I Year - I SEMESTER

S. No	Course Code	Subjects	L	T	P	Credits
1	HS1101	English	3	0	0	3
2	BS1101	Mathematics - I	3	0	0	3
3	BS1106	Applied Chemistry	3	0	0	3
4	ES1112	Fundamentals of Computer Science	3	0	0	3
5	ES1103	Engineering Drawing.	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1107	Applied Chemistry Lab	0	0	3	1.5
8	ES1105	IT Workshop	0	0	3	1.5
9	MC1101	Environmental Science	3	0	0	0
	-	Total Credits	16	0	12	19

I Year - II SEMESTER

S. No	Course Code	Subjects	L	T	P	Credits
1	BS1202	Mathematics – II	3	0	0	3
2	BS1203	Mathematics – III	3	0	0	3
3	BS1204	Applied Physics	3	0	0	3
4	ES1201	Programming for Problem Solving using C	3	0	0	3
5	ES1213	Digital Logic Design	3	0	0	3
6	BS1205	Applied Physics Lab	0	0	3	1.5
7	HS1203	Communication Skills Lab	0	1	2	2
8	ES1202	Programming for Problem Solving using C Lab	0	0	3	1.5
9	PR1201	Engineering Exploration Project	0	0	2	1
10	MC1204	Constitution of India	3	0	0	0
		Total Credits	18	1	10	21

TENTETIVE LESSON PLAN: R19BS1202

Section : CSE	A	Date: 06/2/2020	Page N	o: 01 of 03
Revision No : 0		Prepared By: T.PRASANNA		$\mathbf{ved} \; \mathbf{By} : \mathbf{HO}$
Tools: Black be		Trepared by . T. TRASANNA	Appro	ved by : HO
No. of Periods		TOPIC	Date	Mode of Delivery
UNIT – I: LIN CO1: To instru	EAR S	YSTEM OF EQUATIONS concept of Matrices in solving algebra:	ic equations	1 2011,019
ΓB:" Engineer	ing Ma	thematics", Dr. T.K.V.Iyengar; S.Cha	nd publications	
1	Introd	uction to matrices	6-2-2020	
2		of matrix- definition, properties	7-2-2020	
3	Proble	ems on rank by Echelon form	10-2-2020 11-2-2020	
4	Rank	by normal form	12-2-2020	-
			13-2-2020	
5	PAQ f	orm problems	14-2-2020	Lecture
			15-2-2020	intersperse
6	Homo	geneous system AX=0	17-2-2020	with discussions
			18-2-2020	discussions
7	Non H	omogeneous system AX=B	19-2-2020	
			20-2-2020	
8	Proble	ms on rank method	22-2-2020	
9	Gauss	Elimination method	24-2-2020	
. 10	Applic	ations on finding current in a circuit	25-2-2020	
11		values-definition	26-2-2020	
12	Prope	rties of Eigen values	27-2-2020	
13		rties of Eigen values	28-2-2020	
14		ms on finding Eigen values,vectors		
15	Proble	ms on finding Eigen values,vectors	29-2-2020	
NIT – II:CAYI	EY HA	MILTON THEOREM, QUADRATIC F	ORMS	
O2: To determ	ine the	eigen values and eigen vectors of a ma	atrix and verifica	tion of Calev
lamilton theor	em			
B:" Engineeri	ng Mat	hematics", Dr. T.K.V.Iyengar; S.Chai	nd publications	
16		Hamilton theorem, verification, problems	2-3-2020	
17		alization – problems	3-3-2020	
18		tic forms - definition, examples	4-3-2020	Lecture
19	Matrix	form of a quadratic form	5-3-2020	interspersed
20		cal form of a quadratic form	9-3-2020	with discussions
21	Method	ls of reducing a QF in to canonical form	11-3-2020	discussions
			12-3-2020	
22	Orthog	onal reduction method	13-3-2020	
23	Congru	ent operations method	14-3-2020	
24		ge's method	16-3-2020	
25		ns on finding nature of a QF	17-3-2020	

	ting lengths of plane curves, volumes and surface areas oring Mathematics", Dr. T.K.V.Iyengar; S.Chand public		iution.
26	Introduction	18-3-2020	***
27	Method-1: Bisection Method	19-3-2020	
28	Problems	20-3-2020	
29	Method-II: Regular False Method	21-3-2020	
30	problems	30-3-2020	Lecture
31	Method-III: Iteration Method	31-3-2020	intersperse
32	problems	1-4-2020	with
33	Method-IV: Newton Raphson Method	3-4-2020	discussions
34	problems	4-4-2020	
35	Gauess-Jordan method	6-4-2020	-
36	Gauess-Seidal iteration method	7-4-2020	
	INTERPOLATION	7-4-2020	
TB:" Engine	ering Mathematics", Dr. T.K.V.Iyengar; S.Chand Introduction	8-4-2020	
38	Forward and backward differences	9-4-2020	-
30	Torward and backward differences	13-4-2020	
39	Newton's forward interpolation formula -	15-4-2020	Lecture
37	problems	16-4-2020	
40			interspersed with
40	Newton's backward forward interpolation	17-4-2020	discussions
41	formula -problems problems	18-4-2020 20-4-2020	discussions
71	problems	21-4-2020	
42	Gauss Forward interpolation formula -problems	22-4-2020	
43	Gauss backward interpolation formula -problems	23-4-2020	
44	Lagrange's Interpolation formula	24-4-2020	
	2 agrange o meer polation formula	25-4-2020	
45	problems	27-4-2020	
	problems	28-4-2020	
46	operators	29-4-2020	
	operators	30-4-2020	
	UMERICAL INTEGRATION AND SOLUTION O	A CONTRACTOR OF THE PROPERTY O	
NIT _ V· N	gradient, divergent and curl by using differential of		
	candidate diversent and cuit by using uniterilial (peratur	
CO5: To find	ering Mathematics" Dr. T.K.V. Ivengar: S. Chand n	uhlications	
CO5: To find B:" Engine	ering Mathematics", Dr. T.K.V.Iyengar; S.Chand p		
CO5: To find	ering Mathematics", Dr. T.K.V.Iyengar; S.Chand p Trapezoidal rule	1-5-2020	Lacture
CO5: To find CB:" Engine 47	Trapezoidal rule	1-5-2020 2-5-2020	Lecture
CO5: To find B:" Engine	ering Mathematics", Dr. T.K.V.Iyengar; S.Chand p	1-5-2020 2-5-2020 4-5-2020	interspersed
CO5: To find CB:" Engine 47	Trapezoidal rule Simpson's 1/3rd rule	1-5-2020 2-5-2020 4-5-2020 5-5-2020	interspersed with
CO5: To find B:" Engine 47	Trapezoidal rule	1-5-2020 2-5-2020 4-5-2020 5-5-2020 6-5-2020	interspersed
CO5: To find B:" Engine 47	Trapezoidal rule Simpson's 1/3rd rule	1-5-2020 2-5-2020 4-5-2020 5-5-2020	interspersed with

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		11-5-2020	
51	problems	12-5-2020	
read the distance of the proper	THE REPORT OF THE PROPERTY OF	13-5-2020	COLOR PERSONAL MAIN DES COLOR PERSONAL PROPERTY
52	Picard's method of successive approximation	14-5-2020	
		15-5-2020	
53	Euler's method	16-5-2020	
		18-5-2020	
54	Euler's modified method	19-5-2020	
		20-5-2020	
55	Runge- kutta method	21-5-2020	
56	Problems	22-5-2020	
57	Revision	23-5-2020	

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TENTATIVE LESSON PLAN: R19BS1202

Section : CSE Revision No : 0		Date: 26-08-2019		o:01 of 02
Tools: Black be		Prepared By : S.SUMAN	Approv	red By : HOL
No. of Periods		TOPIC	Date	Mode of Delivery
CO1: solve syst Seidel (L3) TB: Engineeri	em of li	TEM OF LINEAR EQUATIONS, EIGEN near algebraic equations using Gauss el hematics", Dr. T.K.V.Iyengar; S.Cha	limination, Gauss .	
1	Introd	uction to matrices	and the second s	
2	Rank o	of matrix- definition, properties		
3	Proble	ms on rank by Echelon form		\
4	Rank b	y normal form		
5	PAQ fo	orm problems		
6	Homog	geneous system AX=0		
7	Non H	omogeneous system AX=B		
3	Proble	ns on rank method	From 06-02-2020	Lecture intersperse
)	Gauss 1	Elimination method	To 22-02-2020	with discussions
10	Eigen v	values – definition		discussion
11	Propert	ies of Eigen values		
12	Propert	ies of Eigen values		
13	Probler	ns on finding eigen values, vectors		
14	Problem	ns on finding eigen values, vectors		
CO2: Develop the pplications (L6)	e use of	VILTON THEOREM, QUADRATIC FO matrix algebra techniques that is need	ed by engineers for	r practical
B: Engineering	Mathe	ematics", Dr. T.K.V.Iyengar; S.Chand	l publications	
.5	Caley F	lamilton theorem, verification, problems		

16	Finding inverse and power of a matrix by caley Hamilton theorem		The last of the state of
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	16-09-2019	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	05-10-2019	
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

-	structures ; br. 1.1t. v. 1 yengar; S. Chand	dublications	
26	Introduction		
27	Method – 1: Bisection method		
28	Problems		
30	Method – 2: Regula falsi method	From:	
31	Problems	07-10-2019	
33	Method – 3: Iteration method	To:	
34	Problems	19-10-2019	Lecture
35	Method – 4: Newton Raphson method	&	interspersed
36	Problems	From:	with
37	Newton Raphson method simultaneous equations	28-10-2019	discussions
38	Gauss Jacobi Method	To:	
39	Gauss Seidal Method	09-11-2019	
40	problems		

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

. 1	Newton's Forward interpolation formula		
43	Problems	1	
44	Newton's Backward interpolation formula		
45	Problems	From:	Lecture
46	Gauss Forward interpolation formula – Problems	11-11-2019	interspersed
47	Problems	_	with
48	Gauss Backward interpolation formula – Problems	To: 30-11-2019	discussions
49	Problems		
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	+	
58	Problems	-	
59	Picard's method of successive approximation	From 04-05-2020	Lecture interspersed
60	Euler's method	To 23-05-2020	with discussions
61	Euler's modified method		discussions
62	Problems		
63	Runge kutta method		
64	Problems		

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TENTATIVE LESSON PLAN: R19BS1203

Section : CSE	A Date:	Page N	To: 01 of 04
Revision No: 0	O Prepared By: S.SUMAN		ved By : HOI
Tools: Black be	pard	110010	ved by . HOI
No. of Periods	TOPIC	Date	Mode of Delivery
	TOR CALCULUS		
CO1: To interp	retthephysical		
meaningofdiffe	rentoperatorssuchasgradient, curlanddive	ergence, to	
estimatethewo	kdoneagainstafield, circulationandfluxusir	ngvectorcalculus	
TB:" Engineeri	ng Mathematics", Dr. T.K.V.Iyengar; S.(Chand publications	
1	Vector Differentiation:Introduction		
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		Lecture interspersed with discussions
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities	From:	
10	. Vector identities	6/2/2020	
11	Problems on application of gradient	To	
12	Problems on divergence and curl	25/2/2020	
13 14	Vector Integration: Introduction		
15	Problems on line integral		
16	Problems on line integral		
17	Problems on surface integrals		
18	Problems on volume integrals Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
	ACE TRANSFORMS		
	reLaplacetransformfor solvingdifferentiale		
B." Engineering	og Mathematics" Dr. T.V. V. Ivanger S. C.	quations	
22	ng Mathematics", Dr. T.K.V.Iyengar; S.C.	nand publications	
23	Laplace Transforms: Definitions, Existence	3	
24	Laplace Transform of standard functions		
24	Linearity property; Shifting properties	From	
25	Change of scale property	26/2/2020	Lecture
25	Laplace Transforms of derivatives; Integral	s To	interspersed
26	$L(t^n f(t))$	11/3/2020	with
27	Laplace Transforms of division by t	11/3/2020	discussions
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit	(A)	
20	step functions; Unit impulse functions		
30	Inverse Laplace Transforms:		
	Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
O3:TO	OURIER SERIES AND FOURIER TRANSFORMS findorcomputetheFourierseriesofperiodicsignals	,abletoappl	y integr
pressionsfo	r theforwardsandinverseFouriertransformtoara	ngeofnon-period	licwaveforms
	ing Mathematics", Dr. T.K.V.Iyengar; S.Chand pub	lications	
34	Introduction		
35 36	Periodic functions		
37	Fourier series of periodic function Dirchlets conditions		
38	Even and odd functions	From 12/3/2020	Lecture interspersed with discussions
39	Change of interval		
40	Half range sine and cosine series	The Street of the Street Street, Stree	
41	Fourier transforms	To 11/4/2020	
42	Fourier integral theorem		
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46 .	Inverse transforms		
47	Finite Fourier transforms	\dashv	
VIT – IV: P	DE OF FIRST ORDER		
	fysolutionmethodsforpartialdifferentialequation		
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			icalprocesses
B:" Enginee	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand		icalprocesses
3:" Enginee 48	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand Introduction		icalprocesses
3:" Enginee	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand Introduction Formation of PDE by eliminating arbitrary		icalprocesses
3:" Enginee 48 49	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand Introduction Formation of PDE by eliminating arbitrary constants		Icalprocesses
3:" Enginee 48	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary		Icalprocesses
3:" Enginee 48 49 50	ring Mathematics", Dr. T.K.V.Iyengar; S.Chane Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions		Icalprocesses
48 49 50	ring Mathematics", Dr. T.K.V.Iyengar; S.Chance Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE	d publications	
3:" Enginee 48 49 50 51 52	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand Introduction Formation of PDE by eliminating arbitrary constants Formation of PDE by eliminating arbitrary functions Solutions of PDE Method of grouping	d publications From	Lecture
3:" Enginee 48 49 50 51 52 53	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand 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 12/3/2020	Lecture interspersed
50 51 52 53 54	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand 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 12/3/2020 To	Lecture interspersed with
50 51 52 53 54 55	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand 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 12/3/2020	Lecture interspersed
50 51 52 53 54 55 56	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand 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 12/3/2020 To	Lecture interspersed with
50 51 52 53 54 55	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand 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 12/3/2020 To	Lecture interspersed with
50 51 52 53 54 55 56	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand 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 12/3/2020 To	Lecture interspersed with
50 51 52 53 54 55 56 57	ring Mathematics", Dr. T.K.V.Iyengar; S.Chand 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 12/3/2020 To	Lecture interspersed with

TB:" Engine	ionmethodsforpartialdifferentialequationsthatmode ering Mathematics", Dr. T.K.V.Iyengar; S.Chand p	ublications	esses
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF		
	Finding PI: RHS term of the type $e^{(ax+by)}$	From	Lecture
62	$\sin(ax + by); \cos(ax + by)$	27/4/2020	interspersed
63	$x^m y^n$	То	with
64	Method of separation of variables	7/5/2020	discussions
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

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TENTATIVE LESSON PLAN: R19BS1203

Section : CSE	B Date:	Page N	o: 01 of 04
Revision No : 00			ed By : HOD
Tools: Black bo		Пррто	tu by . Hob
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT - I: VECT	OR CALCULUS		
CO1: To interp	retthephysical		
meaningofdiffe	entoperatorssuchasgradient,curlanddiverg	ence, to	
	kdoneagainstafield, circulationandfluxusing		
TB:" Engineeri	ng Mathematics", Dr. T.K.V.Iyengar; S.Ch	and publications	
1	Vector Differentiation:Introduction		
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		Lecture interspersed
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient	From:	
9	Vector identities		with
10	Vector identities	6/2/2020	discussions
11	Problems on application of gradient	To	
12	Problems on divergence and curl	25/2/2020	
13	Vector Integration: Introduction		
14	Problems on line integral		
15	Problems on line integral		
16 17	Problems on surface integrals		
18	Problems on volume integrals Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
	ACE TRANSFORMS		
	neLaplacetransformfor solvingdifferentialeg	uations	
	ng Mathematics", Dr. T.K.V.Iyengar; S.Ch		
22	Laplace Transforms: Definitions, Existence	and publications	T
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties	From	Lecture
25	Change of scale property	26/2/2020	
25	Laplace Transforms of derivatives; Integrals	To	interspersed
26	$L(t^n f(t))$	11/3/2020	discussions
27	Laplace Transforms of division by t	11.0.2020	discussions
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions		
30	Inverse Laplace Transforms:		
	Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
O3:TO xpressionsf	OURIER SERIES AND FOURIER TRANSFORMS findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarangring Mathematics", Dr. T.K.V.Iyengar; S.Chand public		
CO3:TO xpressionsf	findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarans	geofnon-period	
O3:TO xpressionsf B:" Enginee	findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarang ring Mathematics", Dr. T.K.V.Iyengar; S.Chand public	geofnon-period	
O3:TO xpressionsf B:" Enginee	findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarang ring Mathematics", Dr. T.K.V.Iyengar; S.Chand public Introduction Periodic functions Fourier series of periodic function	geofnon-period	
CO3:TO expressionsf B:" Engineer 34 35	findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarang ring Mathematics", Dr. T.K.V.Iyengar; S.Chand public Introduction Periodic functions	geofnon-period actions	
203:TO xpressionsf B:" Enginee 34 35 36 37 38	findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarang ring Mathematics", Dr. T.K.V.Iyengar; S.Chand public Introduction Periodic functions Fourier series of periodic function	geofnon-period eations From	
xpressionsf B:" Enginee 34 35 36 37	findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarang ring Mathematics", Dr. T.K.V.Iyengar; S.Chand public Introduction Periodic functions Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval	geofnon-period actions	Lecture
203:TO expressionsf B:" Engineer 34 35 36 37 38	findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarang ring Mathematics", Dr. T.K.V.Iyengar; S.Chand public Introduction Periodic functions Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval Half range sine and cosine series	geofnon-period eations From	Lecture interspersed
203:TO xpressionsf B:" Enginee 34 35 36 37 38 39	findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarang ring Mathematics", Dr. T.K.V.Iyengar; S.Chand public Introduction Periodic functions Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval	geofnon-period cations From 12/3/2020	Lecture interspersed with
203:TO xpressionsf B:" Enginee 34 35 36 37 38 39 40	findorcomputetheFourierseriesofperiodicsignals or theforwardsandinverseFouriertransformtoarang ring Mathematics", Dr. T.K.V.Iyengar; S.Chand public Introduction Periodic functions Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval Half range sine and cosine series	From 12/3/2020	Lecture interspersed

UNIT - IV: PDE OF FIRST ORDER

Properties

Inverse transforms

44 45

46

47

CO 4: To identify solution methods for partial differential equations that model physical processes

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

Sine and cosine transforms

Finite Fourier transforms

48	Introduction	1	
49	Formation of PDE by eliminating arbitrary		
	constants		
50	Formation of PDE by eliminating arbitrary		
	functions		
51	Solutions of PDE	From	
52	Method of grouping	12/4/2020	Lecture
53	Method of multipliers	To	interspersed
54	Nonlinear PDE $f(p,q) = 0$	1 6/4/2020	with
55	Nonlinear PDE $f(p,q,z) = 0$		discussions
56	Nonlinear PDE $f(p, x) = g(q, y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m,qy^n)=0$		
60	$f(pz^m,qz^m)=0$		
UNIT - V: S	ECOND ORDER PARTIAL DIFFERENTIAL FOUR	ATIONS AND AP	PLICATIONS

CO5: identifysolut TB:" Engine	ionmethodsforpartialdifferentialequationsthatmod ering Mathematics", Dr. T.K.V.Iyengar; S.Chand	elphysicalproc	To
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF		
	Finding PI: RHS term of the type $e^{(ax+by)}$	From	Lecture interspersed
62	$\sin(ax + by); \cos(ax + by)$	27/4/2020	
63	$x^m y^n$	То	with
64	Method of separation of variables	7/5/2020	discussions
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		The state of

2 January Signature of HOD

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TENTATIVE LESSON PLAN: RI9 RS 12 OL

Section :	tle: Applied Physics			•
		Date: 04.02.2020	Page I	No:00
Revision N Fools:		Prepared By : D UDAYA KEERT		ved By : HO
				Man to the print of the party
No. of		TOPIC	DATE	Mode of
Periods	TO COM TO STATE			Delivery
UNIT -I	UNIT- I WAVE			Denvery
	CO1: Analyze th	e differences between interference and		
	diffraction with a	pplications. And illustrate the resolving		Lecture
	power of various	optical instruments.		intersperse
1	Introduction, Prin	ciple of Super Position	07/02/22	
2	Interference of lie	tht, Conditions for Sustained	07/02/20	discussion
	Interference	as, conditions for Sustained	To	
3	Interference in thi	n films	06/03/20	
4	Newton Rings		-	
5	Newton Rings, Pr	oblems	+	
6	Diffraction-Fraun	hofer diffraction		1.5
7-	Diffraction due to	single slit	1	
8	Double slit, N-Slit			:
9		Intensity distribution curves	1	
10	Rayleigh Criterion	distribution curves	+	
11	Diffraction Gratin		1	
12	Resolving Power	of Telescope, Grating	1	-
13	RP OF Microscop	e		Lecture
14	Problems			intersperse
UNIT II	QUANYUM ME	CHANICS:		with discussions
	CO2: Explain the	fundamental concepts of quantum		discussions
	mechanics. Analyz	e the physical significance of wave		
	function and apply	the Schrodinger wave equation for		
	energy values of fr	ee particle.		
15	Introduction, Mate	r waves. De Broglie waves	07/03/20	
16	Davison and Germ	an expt.	To	
17	G.P.Thomson expt		14/03/20	
18	Hesenberg uncertain		14/05/20	
19	Schrodinger time d	ependent wave equation		
20	Schrodinger time i	ndependent wave equation		
21	Particle in a box			
22	Problems			Lecture
NIT-III	CLASICAL FREE	E ELECTRON THEORY AND		interspersed
	BAND THEORY	OF SOLIDS		with
	CO3:Analyze the	effect of temperature on Fermi-Dirac		discussions
	distribution function	on and summarize various types of		G15CG5510115
	solids based on ban	d theory. electron theory in the study		
	of electrical conduc	tivity.		
23	Classical free electr	on theory, merits and demerits	15/03/20	
24	Quantum free elect	ron theory	To	
25	Fermi Dirac distribu	tion function and its temperature	10	
	dependendence		13/04/20	
26	Fermi energy, Densi	ty of states	13/04/20	
	Blochs theorem, Kro			
28	Kronig penney mod	91		
Charles out of the control of the co		ification of materials		7.344

29	Energy bands- Classification of materials	06/04/20	
30	E vs K Diagram-Effective mass of electron-	08/04/20	
31	M vs k diagram, concept of hole	11/04/20	Lecture
. 32	Problems	13/04/20	interspersed
UNIT-IV:	CO4: Classify the energy bands of semiconductors, out line the properties of N and P type		with discussions
	semiconductors and identify the type of semiconductor using Hall effect.		
33	Introduction-Intrinsic semiconductor	15/04/20	
34	Density of charge carriers, electrical conductivity	15/04/20	
35	Fermi level-extrinsic semiconductors	15/04/20	
36	p-type and n-type-density of charge carriers	16/04/20	
37	Dependence of Fermi energy on carrier	16/04/20	
37	concentration and	22/04/20	
38	temperature, Hall effect,	25/04/20	4
39	Hall co-efficient, Applications of Hall effect	25/04/20	
40	Drift and diffusion currents	29/04/20	1
41	Einstein's Equation	30/04/20	Lecture
42	Problems	02/05/20	interspersed
UNIT- V	MAGNETISM & DIELECTRICS	04/05/20	with discussions
	CO5: Explain the applications of dielectric and magnetic materials and apply the concept of magnetism to magnetic devices.		discussions
43	MAGNETISM: Introduction	06/05/20	
44	Magnetic dipole momentum, Magnetization-	07/05/20	
45	Magnetic susceptibility and permeability	07/05/20	
46	Origin of permanent magnetic moment	09/05/20	
47	Bohr Magneton -Classification of magnetic materials (Dia, Para and Ferro)	09/05/20	
48	Soft and hard magnetic materials	11/05/20	
49	Applications of Ferromagnetic material	11/05/20	Lecture
50	Problems	13/05/20	interspersed
51	DIELECTRICS: Introduction,		with
52	Dielectric polarization	13/05/20	discussions
53	Susceptibility and Dielectric constant	14/05/20	
54	Types of polarizations: Electronic and Ionic (Quantitative),	14/05/20	
. 55	Orientation polarizations	16/05/20	
56	Lorentz internal field	18/05/20	
57	Claussius Mossoti equation-	20/05/20	
58	Entrinsic SC's	21/05/20	
59	Drift & Diffusion	23/05/20	
60	Einstein's Equation	23/05/20	
61	Hall Effect & Problems	25/05/20	

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TENTATIVE LESSON PLAN: R 19 BS 1204

Course T	TENTATIVE LESSON PLAN: 1 tle: Applied Physics	K1913512	204
Section :		Page N	Vo : 00
Revision			ved By : HOD
Tools:		A TAPPIO	ved by . HOD
No. of	TOPIC	DATE	Mode of
Periods	10110	DAIL	
UNIT -I	UNIT- I WAVE OPTICS		Delivery
	CO1: Analyze the differences between interference and		
	diffraction with applications. And illustrate the resolving		Lecture
	power of various optical instruments.		interspersed
1		0.610.010.0	with
2	Introduction, Principle of Super Position	06/02/20	discussions
	Interference of light, Conditions for Sustained Interference	To	
3	Interference in thin films	06/03/20	
4	Newton Rings		
5	Newton Rings, Problems	-	
6	Diffraction-Fraunhofer diffraction.		
7	Diffraction due to single slit		
8	Double slit, N-Slit	+	
9	Circular aperture, Intensity distribution curves	+	
10	Rayleigh Criterion	+	
11	Diffraction Grating	1	
12	Resolving Power of Telescope, Grating		Lecture
13	RP OF Microscope		interspersed
14	Problems		with
UNIT II	QUANYUM MECHANICS:		discussions
	CO2: Explain the fundamental concepts of quantum		4.
	mechanics. Analyze the physical significance of wave		
	function and apply the Schrodinger wave equation for		
	energy values of free particle.		
15	Introduction, Mater waves. De Broglie waves	07/03/20	
16	Davison and German expt,	То	
17	G.P.Thomson expt,	14/03/20	
18	Hesenberg uncertainty principle		
19	Schrodinger time dependent wave equation		
20	Schrodinger time independent wave equation		
21	Particle in a box		
22	Problems		Lecture
UNIT-III	CLASICAL FREE ELECTRON THEORY AND		interspersed
	BAND THEORY OF SOLIDS		with
	CO3: Analyze the effect of temperature on Fermi-Dirac		discussions
	distribution function and summarize various types of		
	solids based on band theory. electron theory in the study of electrical conductivity.		
23		1.7/00/50	
24	Classical free electron theory, merits and demerits Quantum free electron theory	15/03/20	
25	Fermi Dirac distribution function and its temperature	То	
7.	dependence	13/04/20	
26	Fermi energy, Density of states	13/04/20	
27	Blochs theorem, Kronig penney model		Transition of the second
28	Kronig penney model	The second second	
29	Energy bands- Classification of materials		
The same of the sa	and Stranger Classification of materials	7	

30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems		Lecture
UNIT-IV:	SEMICONDUCTUR PHYSICS	The state of the s	interspersed
Carrier of the contract of the	CO4: Classify the energy bands of semiconductors, out	and control of the state of the	with
7	line the properties of N and P type semiconductors and		discussions
	identify the type of semiconductor using Hall effect.		413643310113
. 33	Introduction-Intrinsic semiconductor		
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
36	p-type and n-type-density of charge carriers	1	
37	Dependence of Fermi energy on carrier concentration and	15/04/20	
38	temperature, Hall effect,	To	
39	Hall co-efficient, Applications of Hall effect	04/05/20	
40	Drift and diffusion currents		Lecture
41	Einstein's Equation		interspersed
42	Problems		with
UNIT- V	MAGNETISM & DIELECTRICS		discussions
	CO5: . Explain the applications of dielectric and		
	magnetic materials and apply the concept of magnetism		
· · · · · · ·	to magnetic devices.		
43	MAGNETISM: Introduction	06/05/20	
44	Magnetic dipole momentum, Magnetization-	То	Topic of the second
45	Magnetic susceptibility and permeability		
46	Origin of permanent magnetic moment	13/05/20	
47	Bohr Magneton -Classification of magnetic materials		
	(Dia, Para and Ferro)		Lecture
48	Soft and hard magnetic materials		interspersed
49	Applications of Ferromagnetic material		with
50	Problems		discussions
51	DIELECTRICS: Introduction,		
52	Dielectric polarization		
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic		
	(Quantitative),		
55	Orientation polarizations	14/05/20	
56	Lorentz internal field	To	
57	Claussius Mossoti equation-	25/05/20	
58	Entrinsic SC's		
59	Drift & Diffusion		
60	Einstein's Equation		
- 61	Hall Effect & Problems		

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DEPARTMENT OF SCIENCE AND HUMANITIES

TENTATIVE LESSON PLAN

Course Title: PRO	GRAMMING FOR PROBLEM SOLVIN	G USING C (R19ES1201)
Section : Sec A	Date: 26/8/2019	Page No: 01 of 03
Revision No: 00	Prepared By : G. Keerthi	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
program	Introduction to C language to learn about the computer systems, computing environ and Structure of a C Program. Fogramming for Problem Solving, Behrouz A. Forouza		
1	Computer Systems	27-8-19	
2	Computing Environments	28-8-19	
3	Computer languages	28-8-19	
4	Creating and running Programs	29-8-19	Lecture
5	Computer Numbering System	30-8-19	Interspersed
6	Storing Integers	· 31-8-19	With
7	Storing Real Numbers	3-9-19	
8	C Programs, Identifiers	4-9-19	discussions
9	Types, Variable	4-9-19	7
10	Constants, Input/output	5-9-19	
11	Programming Examples	6-9-19	
12	Scope, Storage Classes and Type Qualifiers	7-9-19	
13	Expressions Precedence and Associativity	11-9-19	
14	Side Effects, Evaluating Expressions	11-9-19	†
15	Type Conversion Statements	12-9-19	
16	Simple Programs	13-9-19	
17	Command Line Arguments	17-9-19	
18	Tutorial	17-9-19	-

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

TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE

19	Exact Size Integer Types	18-9-19	
20	Logical Bitwise Operators	18-9-19	
21	Shift Operators	19-9-19	

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DEPARTMENT OF SCIENCE AND HUMANITIES

22	Logical Data and Operators	20-9-19	
23	Two Way Selection	21-9-19	Lecture
24	Multiway Selection	24-9-19	interspersed
25.	More Standard Functions	25-9-19	with
26	Concept of Loop	25-9-19	discussions
27	Pretest and Post-test Loops	26-9-19	
28	Initialization and Updating	27-9-19	
29	Event and Counter Controlled Loops	28-9-19	
30	Loops in C	1-10-19	
31	Other Statements Related to Looping	3-10-19	
32	Looping Applications	4-10-19	Ī
33	Programming Example The Calculator Program	5-10-19	
35	Tutorial	5-10-19	
No. of	TOPIC	Date	Mode of
Periods			
UNIT-III CO3: To To learn	learn about the design concepts of arrays, strings, enum about their usage. ogramming for Problem Solving, Behrouz A. Forouzan,		
UNIT-III CO3: To To learn	learn about the design concepts of arrays, strings, enum about their usage.		union types.
UNIT-III CO3: To To learn TB1: Pro	learn about the design concepts of arrays, strings, enum about their usage. ogramming for Problem Solving, Behrouz A. Forouzan, l	Richard F.Gilberg, C	union types.
UNIT-III CO3: To Fo learn FB1: Pro	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C	Richard F.Gilberg, C	union types.
UNIT-III CO3: To Fo learn: FB1: Pro 36 37	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, learned Concepts, Using Array in C Array Application	Richard F.Gilberg, C 15-10-19 16-10-19	union types.
UNIT-III CO3: To Fo learn FB1: Pro 36 37 38	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19	union types.
UNIT-III CO3: To Fo learn : FB1: Pro 36 37 38 39	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, learning Concepts, Using Array in Concepts,	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19	union types.
UNIT-III CO3: To Fo learn: TB1: Pro 36 37 38 39 40	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example – Calculate Averages	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19	union types.
UNIT-III CO3: To Fo learn FB1: Pro 36 37 38 39 40 41	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, learned Concepts, Using Array in C. Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example – Calculate Averages String Concepts, C String	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19 19-10-19	union types.
UNIT-III CO3: To Fo learn: TB1: Pro 36 37 38 39 40 41 42	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example — Calculate Averages String Concepts, C String String Input / Output Functions	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19 19-10-19 29-10-19	union types.
UNIT-III CO3: To Fo learn: TB1: Pro 36 37 38 39 40 41 42 43	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example – Calculate Averages String Concepts, C String String Input / Output Functions Arrays of Strings	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19 19-10-19 29-10-19 30-10-19	ENGAGE
UNIT-III CO3: To Fo learn: TB1: Pro 36 37 38 39 40 41 42 43 44	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example – Calculate Averages String Concepts, C String String Input / Output Functions Arrays of Strings String Manipulation Functions	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19 19-10-19 29-10-19 30-10-19	Lecture
UNIT-III CO3: To Fo learn : TB1: Pro 36 37 38 39 40 41 42 43 44 45	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example – Calculate Averages String Concepts, C String String Input / Output Functions Arrays of Strings String Manipulation Functions String/ Data Conversion	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19 19-10-19 29-10-19 30-10-19 31-10-19	Lecture interspersed
UNIT-III CO3: To Fo learn TB1: Pro 36 37 38 39 40 41 42 43 44 45 46	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example – Calculate Averages String Concepts, C String String Input / Output Functions Arrays of Strings String Manipulation Functions String/ Data Conversion A Programming Example – Morse Code	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19 19-10-19 29-10-19 30-10-19 31-10-19 1-11-19	ENGAGE
UNIT-III CO3: To Fo learn FB1: Pro 36 37 38 39 40 41 42 43 44 45 46 47	learn about the design concepts of arrays, strings, enumabout their usage. Ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example — Calculate Averages String Concepts, C String String Input / Output Functions Arrays of Strings String Manipulation Functions String/ Data Conversion A Programming Example — Morse Code The Type Definition (Type def) Enumerated Types Structure	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19 19-10-19 29-10-19 30-10-19 31-10-19 1-11-19 2-11-19	Lecture interspersed
UNIT-III CO3: To Fo learn : FB1: Pro 36 37 38 39 40 41 42 43 44 45 46 47 48	learn about the design concepts of arrays, strings, enumabout their usage. ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example — Calculate Averages String Concepts, C String String Input / Output Functions Arrays of Strings String Manipulation Functions String/ Data Conversion A Programming Example — Morse Code The Type Definition (Type def) Enumerated Types Structure Unions	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19 19-10-19 29-10-19 30-10-19 31-10-19 1-11-19 2-11-19 5-11-19	Lecture interspersed with
UNIT-III CO3: To Fo learn FB1: Pro 36 37 38 39 40 41 42 43 44 45 46 47 48 49	learn about the design concepts of arrays, strings, enumabout their usage. Ogramming for Problem Solving, Behrouz A. Forouzan, I Concepts, Using Array in C Array Application Two Dimensional Arrays Multidimensional Arrays Programming Example — Calculate Averages String Concepts, C String String Input / Output Functions Arrays of Strings String Manipulation Functions String/ Data Conversion A Programming Example — Morse Code The Type Definition (Type def) Enumerated Types Structure	Richard F.Gilberg, C 15-10-19 16-10-19 16-10-19 17-10-19 18-10-19 19-10-19 29-10-19 30-10-19 31-10-19 1-11-19 2-11-19 5-11-19	Lecture interspersed with

CO4: To assimilate about pointers, dynamic memory allocation and know the significance of



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DEPARTMENT OF SCIENCE AND HUMANITIES

Preproce TB1: Pre	essor. ogramming for Problem Solving, Behrouz A. Forou	ızan, Richard F.Gilberg, Cl	ENGAGE
No. of Periods	TOPIC	Date	Mode of Delivery
53	Introduction	8-11-19	
54	Pointers to pointers	12-11-19	
55	Compatibility, L value and R value	13-11-19	
56	Arrays, and Pointers	13-11-19	T
57	Pointer Arithmetic and Arrays	14-11-19	Lecture interspersed
58	Memory Allocation Function	15-11-19	with
59	Array of Pointers	16-11-19	discussions
60	Programming Application	19-11-19	Contraction of the Contraction o
61	Processor Commands	20-11-19	
62	Tutorial	20-11-19	
UNIT-V	Files and Functions		
CO5: To	assimilate about File I/O and significance of functi	ions.	
	ogramming for Problem Solving, Behrouz A. Forou		ENGAGE
63	Files, Streams	21-11-19	
64	Standard Library Input / Output Functions	· 22-11-19	
65	Formatting Input / Output Functions	23-11-19	
66	Character Input / Output Functions	26-11-19	
67	Text versus Binary Streams	27-11-19	
68	Functions for Files	27-11-19	
69	Converting File Type	28-11-19	
70	Designing, Structured Programs	29-11-19	Lecture
71	Function in C	30-11-19	interspersed with
72	User Defined Functions	3-12-19	discussions
73	Inter-Function Communication	4-12-19	discussions
74	Standard Functions	4-12-19	
75	Passing Array to Functions	5-12-19	
76	Passing Pointers to Functions	10-12-19	1
77	Recursion	12-12-19	
78	Passing an Array to Function	17-12-19	
79	Tutorial	19-12-19	

Cr. Certli Signature of Faculty

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TENTATIVE LESSON PLAN

Course Title: PRO	GRAMMING FOR PROBLEM SOLVING	USING C (R19ES1201)		
Section : Sec B Date : 26/8/2019 Page No : 01 of 03				
Revision No: 00	Prepared By : M.V.Sumanth	Approved By : HOD		

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery		
UNIT-I Introduction to C language CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program. TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE					
1	Computer Systems	26-8-19			
2	Computing Environments	28-8-19			
3	Computer languages	29-8-19			
4	Creating and running Programs	30-8-19	Lecture		
5	Computer Numbering System	30-8-19	Interspersed		
6	Storing Integers ·	31-8-19	With		
7	Storing Real Numbers	2-9-19			
8	C Programs, Identifiers	4-9-19	discussions		
9	Types, Variable	5-9-19			
10	Constants, Input/output	6-9-19			
11	Programming Examples	6-9-19			
12	Scope, Storage Classes and Type Qualifiers	7-9-19			
13	Expressions Precedence and Associativity	9-9-19			
14	Side Effects, Evaluating Expressions	12-9-19			
15	Type Conversion Statements	13-9-19			
16	Simple Programs	13-9-19			
17	Command Line Arguments	16-9-19			
18	Tutorial	16-9-19			
	Operators, Selection and Repetition gain knowledge of the operators, selection, control st ogramming for Problem Solving, Behrouz A. Forouza				
	Expat Size Integer Trace	10.0.10			

19	Exact Size Integer Types	18-9-19	
20	Logical Bitwise Operators	19-9-19	
21	Shift Operators	20-9-19	

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DEPARTMENT OF SCIENCE AND HUMANITIES

No. of Periods	TOPIC	Date	Mode of Delivery
35	Tutorial	4-10-19	12.7
33	Programming Example The Calculator Program	4-10-19	
32	Looping Applications	4-10-19	
31	Other Statements Related to Looping	3-10-19	-
30	Loops in C	30-9-19	
29	Event and Counter Controlled Loops	28-9-19	
28	Initialization and Updating	27-9-19	
27	Pretest and Post-test Loops	27-9-19	
26	Concept of Loop	26-9-19	discussions
25	More Standard Functions	25-9-19	with
24	Multiway Selection	23-9-19	interspersed
23	Two Way Selection	21-9-19	Lecture
22	Logical Data and Operators	20-9-19	

UNIT-III Arrays, String, Enum, Structure, Unions

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

TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE

36	Concepts, Using Array in C	5-10-19	
37	Array Application	14-10-19	
38	Two Dimensional Arrays	16-10-19	
39	Multidimensional Arrays	17-10-19	1
40	Programming Example – Calculate Averages	18-10-19	
41	String Concepts, C String	18-10-19	1
42	String Input / Output Functions	19-10-19	
43	Arrays of Strings	28-10-19	
44	String Manipulation Functions	30-10-19	
45	String/ Data Conversion	31-10-19	
46	A Programming Example – Morse Code	1-11-19	Lecture
47	The Type Definition (Type def)	1-11-19	interspersed
48	Enumerated Types	2-11-19	with
49	Structure	4-11-19	
50	Unions	6-11-19	discussions
51	Programming Application	7-11-19	
52	Tutorial	7-11-19	

UNIT-IV Pointers

CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.

TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE



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DEPARTMENT OF SCIENCE AND HUMANITIES

59 Array of Pointers 60 Programming Application 61 Processor Commands 62 Tutorial UNIT-V Files and Functions CO5: To assimilate about File I/O and significance of functions. TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE 63 Files, Streams 64 Standard Library Input / Output Functions 65 Formatting Input / Output Functions 66 Character Input / Output Functions 67 Text versus Binary Streams 68 Functions for Files 69 Converting File Type 70 Designing Structured Programs 15-11-19 With discussions with discussions 18-11-19 Voit Point Input 20-11-19 20-11-19 21-11-19 22-11-19 23-11-19 24-11-19 25-11-19 25-11-19 26-11-19 27-11-19 28-11-19	No. of Periods	TOPIC	Date	Mode of Delivery
Solution	53	Introduction	8-11-19	
13-11-19	54	Pointers to pointers	8-11-19	
13-11-19	55	Compatibility, L value and R value	11-11-19	
Memory Allocation Function 15-11-19 interspersed	56	Arrays, and Pointers	13-11-19	
Section Sect	57	Pointer Arithmetic and Arrays	14-11-19	
16-11-19 discussions	58	Memory Allocation Function	15-11-19	interspersed
18-11-19	59	Array of Pointers	15-11-19	
Tutorial 18-11-19	60		16-11-19	discussions
UNIT-V Files and Functions CO5: To assimilate about File I/O and significance of functions. TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE 63 Files, Streams 20-11-19 64 Standard Library Input / Output Functions 21-11-19 65 Formatting Input / Output Functions 22-11-19 66 Character Input / Output Functions 22-11-19 67 Text versus Binary Streams 23-11-19 68 Functions for Files 25-11-19 69 Converting File Type 27-11-19 70 Designing, Structured Programs 28-11-19 71 Function in C 29-11-19 72 User Defined Functions 30-11-19 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19	61	Processor Commands	18-11-19	
CO5: To assimilate about File I/O and significance of functions. TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE 63 Files, Streams 64 Standard Library Input / Output Functions 65 Formatting Input / Output Functions 66 Character Input / Output Functions 67 Text versus Binary Streams 68 Functions for Files 69 Converting File Type 70 Designing, Structured Programs 71 Function in C 72 User Defined Functions 73 Inter-Function Communication 74 Standard Functions 75 Passing Array to Functions 76 Passing Pointers to Functions 77 Recursion 78 Recursion 79 Time Interval Input / Output Functions 79 Passing Pointers to Functions 70 Time Interval Input / Output Functions 70 Designing, Structured Programs 71 Function in C 72 User Defined Functions 74 Standard Functions 75 Passing Pointers to Functions 76 Passing Pointers to Functions 77 Recursion 78 Passing Pointers to Functions 79 Passing Pointers to Functions 70 Passing Pointers to Functions 71 Passing Pointers to Functions 75 Passing Pointers to Functions 76 Passing Pointers to Functions 77 Recursion	62	Tutorial	18-11-19	
64 Standard Library Input / Output Functions 21-11-19 65 Formatting Input / Output Functions 22-11-19 66 Character Input / Output Functions 22-11-19 67 Text versus Binary Streams 23-11-19 68 Functions for Files 25-11-19 69 Converting File Type 27-11-19 70 Designing, Structured Programs 28-11-19 71 Function in C 29-11-19 72 User Defined Functions 30-11-19 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				ENGAGE
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE 63 Files, Streams 20-11-19 64 Standard Library Input / Output Functions 21-11-19 65 Formatting Input / Output Functions 22-11-19 66 Character Input / Output Functions 22-11-19 67 Text versus Binary Streams 23-11-19 68 Functions for Files 25-11-19 69 Converting File Type 27-11-19 70 Designing, Structured Programs 28-11-19 71 Function in C 29-11-19 72 User Defined Functions 30-11-19 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19			ıc	
65 Formatting Input / Output Functions 22-11-19 66 Character Input / Output Functions 22-11-19 67 Text versus Binary Streams 23-11-19 68 Functions for Files 25-11-19 69 Converting File Type 27-11-19 70 Designing, Structured Programs 28-11-19 71 Function in C 29-11-19 72 User Defined Functions 30-11-19 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				
66 Character Input / Output Functions 22-11-19 67 Text versus Binary Streams 23-11-19 68 Functions for Files 25-11-19 69 Converting File Type 27-11-19 70 Designing, Structured Programs 28-11-19 71 Function in C 29-11-19 72 User Defined Functions 30-11-19 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				
67 Text versus Binary Streams 23-11-19 68 Functions for Files 25-11-19 69 Converting File Type 27-11-19 70 Designing, Structured Programs 28-11-19 71 Function in C 29-11-19 72 User Defined Functions 30-11-19 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19	70.750			+
68 Functions for Files 25-11-19 69 Converting File Type 27-11-19 70 Designing, Structured Programs 28-11-19 71 Function in C 29-11-19 72 User Defined Functions 30-11-19 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				+
69 Converting File Type 27-11-19 70 Designing, Structured Programs 28-11-19 71 Function in C 29-11-19 72 User Defined Functions 30-11-19 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				-
70 Designing, Structured Programs 28-11-19 71 Function in C 29-11-19 72 User Defined Functions 30-11-19 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				+
71 Function in C 29-11-19 interspersed with discussions 72 User Defined Functions 30-11-19 with discussions 73 Inter-Function Communication 2-12-19 4-12-19 74 Standard Functions 4-12-19 5-12-19 75 Passing Array to Functions 5-12-19 6-12-19 76 Passing Pointers to Functions 6-12-19 11-12-19 77 Recursion 11-12-19	20 Sept 20 Sep			Lecture
72 User Defined Functions 30-11-19 with 73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				interspersed
73 Inter-Function Communication 2-12-19 74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				
74 Standard Functions 4-12-19 75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				discussions
75 Passing Array to Functions 5-12-19 76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19	1 00000			†
76 Passing Pointers to Functions 6-12-19 77 Recursion 11-12-19				
77 Recursion 11-12-19				

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Tutorial

79

Signature of HOD

18-12-19

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TENTATIVE LESSON PLAN: ES1213 DIGITAL LOGIC DESIGN

	: Sec A & B	L LOGIC DESIGN Date: 04/11/2020	Page No: 1 to	4
	n No: 00	Prepared By: Dr. B. Vanajakshi / N. Mayuri	Approved By	
		Ts, and Online		
S. No.		Topic	Date	Mode of Delivery
UNIT-I	DIGITAL SY	STEMS AND BINARY NUMBERS		
represen	tation and operat	efine different number systems, binary addition ions with this representation. Heading Mano, Michael D Ciletti, PEA.	and subtraction, 2	2's complemer
1	Digital Syste			
2	Binary Numb	pers		-
3	Octal and He	xadecimal Numbers		
4	Complement	s of Numbers	From: 06-02-2020	Lecture
5	Signed Binar	y Numbers		intersperse with
6	Arithmetic a	ddition and subtraction	To: 18-02-2020	discussions
7	4-bit codes:	BCD, EXCESS 3		
8	9's complem	ent, 2421		
9	alphanumeri	codes		
UNIT-I	I CONCEPT	OF BOOLEAN ALGEBRA		
CO2: A	n ability to under	rstand the different switching algebra theorems and a	pply them for logic	functions.
		e, M. Morris Mano, Michael D Ciletti, PEA.		
10	Basic Theore			
11	Properties of	Boolean algebra		
12	Boolean Fun	ctions		
13	Canonical an	d Standard Forms		
14	Minterms an	d Maxterms.		
15	Problems on	son and nos		

36	T and D Flip Flops, Truth and Excitation Tables		
37	Conversion of Flip Flops.		
UNIT-V	그 그 그래 선생님은 아이에 가는 아이에 가는 아이를 하는데 하는데 하는데 하는데 아이에 가는데 나를 하는데 그를 하는데 그렇게 되었다.		
	ble to design various sequential circuits starting from flip-flo		
TB2: Di	gital Logic and Computer Design, M. Morris Mano, PEA	\.	
38	Registers		
39	Shift Registers	From: 15-05-2020	
40	Ripple Counters	To:	Online
41	Synchronous Counters	29-05-2020	
42	Ring Counter, Johnson Counter.		

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

TB2: Digital Logic and Computer Design, M. Morris Mano, PEA.

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE STRUCTURE - R19

I Year - I SEMESTER

S. No	Course Code	Subjects	L	T	P	Credits
1	HS1101	English	3	0	0	3
2	BS1101	Mathematics - I	3	0	0	3
3	BS1106	Applied Chemistry	3	0	0	3
4	ES1112	Fundamentals of Computer Science	3	0	0	3
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1107	Applied Chemistry Lab	0	0	3	1.5
8 .	ES1105	IT Workshop	Q	0	3	1.5
9	MC1101	Environmental Science	3	0	0	0
		Total Credits	16	0	12	19

I Year - II SEMESTER

S. No	Course Code	Subjects	L	Т	P	Credits
1	BS1202	Mathematics – II	3	0	0	- 3
2	BS1203	Mathematics – III	3	0	0	3
3	BS1204	Applied Physics	3	0	0	3
4	ES1201	Programming for Problem Solving using C	3	0	0	3
5	ES1213	Digital Logic Design	3	0	0	3
6	BS1205	Applied Physics Lab	0	0	3	1.5
7	HS1203	Communication Skills Lab	0	1	2	2
8	ES1202	Programming for Problem Solving using C Lab	0	0	3	1.5
9	PR1201	Engineering Exploration Project	0	0	2	1
10	MC1204	Constitution of India	3	0	0	0
		Total Credits	18	1	10	21

TENTATIVE LESSON PLAN: R19BS1202

Section : IT	Date: 26-08-2019	Page N	o:01 of 02
Revision No: 0	Prepared By: B.V.R.K.RAO		ed By : HOI
Tools: Black be	ard		
No. of Periods	TOPIC	Date	Mode of Delivery
VECTORS CO1: solve syst Seidel (L3) TB:" Engineeri	G SYSTEM OF LINEAR EQUATIONS, em of linear algebraic equations using G ng Mathematics", Dr. T.K.V.Iyengar;	auss 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		Lecture interspersed with discussions
	Homogeneous system AX=0	·	
7	Non Homogeneous system AX=B	From	
3	Problems on rank method	06-02-2020	
)	Gauss Elimination method	To 22-02-2020	
.0	Eigen values – definition		a soussion
1	Properties of Eigen values		
2	Properties of Eigen values		
3	Problems on finding eigen values, vectors		
4	Problems on finding eigen values, vectors		
CO2: Develop the pplications (L6)		is needed by engineers for	practical
s:" Engineering	Mathematics", Dr. T.K.V.Iyengar; S.	Chand publications	
5	Caley Hamilton theorem, verification, prob	lems	

16	Finding inverse and power of a matrix by caley Hamilton theorem		- mark out a series of a
17	Diagonalization – problems		
18	Quadratic forms – definition, examples	From:	Lecture
19	Matrix form of a quadratic form	16-09-2019	interspersed with
20	Canonical form of a quadratic form	To:	discussions
21	Methods of reducing a QF in to canonical form	05-10-2019	
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

, , , , , , , , , , , , , , , , , , , ,		
Introduction		
Method – 1: Bisection method		
Problems	From:	
Method – 2: Regula falsi method		
Problems	07-10-2019	
Method – 3: Iteration method	То:	
Problems	19-10-2019 & From: 28-10-2019	Lecture interspersed with discussions
Method – 4: Newton Raphson method		
Problems		
Newton Raphson method simultaneous equations		
Gauss Jacobi Method	To:	
Gauss Seidal Method	09-11-2019	
problems		
	Introduction Method – 1: Bisection method Problems Method – 2: Regula falsi method Problems Method – 3: Iteration method Problems Method – 4: Newton Raphson method Problems Newton Raphson method simultaneous equations Gauss Jacobi Method Gauss Seidal Method	Method – 1: Bisection method Problems Method – 2: Regula falsi method Problems Method – 3: Iteration method Problems Method – 4: Newton Raphson method Problems Newton Raphson method simultaneous equations Gauss Jacobi Method Gauss Seidal Method From: 28-10-2019 To: 09-11-2019

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		
43	Problems		
44	Newton's Backward interpolation formula		Lecture interspersed
45	Problems	From:	with
46	Gauss Forward interpolation formula – Problems	11-11-2019	discussions
47	Problems	To:	
48	Gauss Backward interpolation formula – Problems	30-11-2019	
49	Problems		
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

	ering Mathematics, Dr. 1.K. v. Iyengar; S. Chand pi	idifications	
53	Trapezoidal rule		
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		
57	Taylor's series method		
58	Problems	From	Lecture
59	Picard's method of successive approximation	04-05-2020	interspersed
60	Euler's method	To 23-05-2020	with discussions
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

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TENTATIVE LESSON PLAN: R19BS1203

Section : IT	Date:	Page N	o:01 of 04
Revision No : 0			red By : HOD
Tools: Black bo		Approv	red by . HOL
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT – I: VEC	TOR CALCULUS		1 2011.019
CO1: To interp	retthephysical		
meaningofdiffe	rentoperatorssuchasgradient, curlanddiverger	ice, to	
estimatethewo	kdoneagainstafield, circulationandfluxusingve	ctorcalculus	
ΓB:" Engineeri	ng Mathematics", Dr. T.K.V.Iyengar; S.Chan	nd publications	
1	Vector Differentiation:Introduction		
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		
7	Curl of a vector		Lecture
8	Properties of gradient		interspersed with discussions
9	Vector identities	From:	
10	Vector identities .	6/2/2020	
11	Problems on application of gradient	То	
12	Problems on divergence and curl	25/2/2020	
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		1
21	Problems on stokes theorem		
	LACE TRANSFORMS		
	heLaplacetransformfor solvingdifferentialequa		
	ng Mathematics", Dr. T.K.V.Iyengar; S.Chan	d publications	
22	Laplace Transforms: Definitions, Existence		
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties		
	Change of scale property	From	Lecture
25	Laplace Transforms of derivatives; Integrals	26/2/2020	interspersed
26	L($t^n f(t)$)	То	with
27		11/3/2020	discussions
	Laplace Transforms of division by t		1.57.1.5010115
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit	 10000
	step functions; Unit impulse functions	
30	Inverse Laplace Transforms:	
	Finding L^{-1} using partial fractions	
31	Properties of inverse transform	
32	Convolution theorem	
33	Solutions of Difference Equations	

UNIT - III: FOURIER SERIES AND FOURIER TRANSFORMS

CO3: TO find or compute the Fourier series of periodic signals , able to apply integral expressions for the forwards and inverse Fourier transform to a range of non-periodic waveforms and the forwards and inverse formation of the forwards and inverse formation of the forwards and inverse formation of the forwards and the forw

ring Mathematics", Dr. T.K. V. Iyengar; S. Chan	d publications	
Introduction		
Periodic functions		
Fourier series of periodic function		
Dirchlets conditions		
Even and odd functions	From	Lecture
Change of interval	12/3/2020	interspersed
Half range sine and cosine series	To	with
Fourier transforms	11/4/2020	
Fourier integral theorem		discussions
Fourier sine and cosine integrals		
Sine and cosine transforms		
Properties		
Inverse transforms		
Finite Fourier transforms		
	Introduction Periodic functions Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval Half range sine and cosine series Fourier transforms Fourier integral theorem Fourier sine and cosine integrals Sine and cosine transforms Properties Inverse transforms	Periodic functions Fourier series of periodic function Dirchlets conditions Even and odd functions Change of interval Half range sine and cosine series Fourier transforms Fourier integral theorem Fourier sine and cosine integrals Sine and cosine transforms Properties Inverse transforms Fourier series of periodic function From 12/3/2020 To 11/4/2020

UNIT - IV: PDE OF FIRST ORDER

 $CO 4: To\ identify solution methods for partial differential equations that model physical processes$

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

48	Introduction	- publications	
49	Formation of PDE by eliminating arbitrary		
	constants		
50	Formation of PDE by eliminating arbitrary		100
	functions		
51	Solutions of PDE	From	
52	Method of grouping	12/3/2020	Lecture
53	Method of multipliers	To	interspersed
54	Nonlinear PDE $f(p,q) = 0$	11/4/2020	with
55	Nonlinear PDE $f(p,q,z) = 0$	11/4/2020	discussions
56	Nonlinear PDE $f(p, x) = g(q, y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n) = 0$		
60	$f(pz^m,qz^m)=0$		

UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS CO5:

TB:" Engine	ering Mathematics", Dr. T.K.V.Iyengar; S.Chand	publications	
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From	Lecture
62	$\sin(ax + by)$; $\cos(ax + by)$	27/4/2020	interspersed
63	$x^m y^n$	То	with
64	Method of separation of variables	7/5/2020	discussions
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

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TENTATIVE LESSON PLAN: RI9 BS1204

	e: Applied Physics	T	
Section : I		Page N	
Revision No		Approv	red By: HOD
Tools:		T = T ==	
No. of	TOPIC	DATE	Mode of
Periods			Delivery
UNIT -I	UNIT- I WAVE OPTICS		
	CO1: Analyze the differences between interference and,		
	diffraction with applications. And illustrate the resolving		Lecture
	power of various optical instruments.		interspersed
1	Introduction, Principle of Super Position	07/02/20	with
2	Interference of light, Conditions for Sustained	To	discussions
	Interference	06/03/20	
3	Interference in thin films		
4	Newton Rings	1	
5	Newton Rings, Problems		
6	Diffraction-Fraunhofer diffraction.		
7	Diffraction due to single slit	To a second and a second and a second as	- in the second
8	Double slit, N-Slit	1	
9	Circular aperture, Intensity distribution curves		
10	Rayleigh Criterion		
11	Diffraction Grating		
12	Resolving Power of Telescope, Grating		Lecture
13	RP OF Microscope		interspersed
14	Problems		with
UNIT II	QUANYUM MECHANICS:		discussions
	CO2: Explain the fundamental concepts of quantum		
	mechanics. Analyze the physical significance of wave		
	function and apply the Schrodinger wave equation for		
	energy values of free particle.		
15	Introduction, Mater waves. De Broglie waves	07/03/20	
16	Davison and German expt,	To	
17	G.P.Thomson expt,	14/03/20	
18	Hesenberg uncertainty principle		
19	Schrodinger time dependent wave equation		
20	Schrodinger time independent wave equation		
21	Particle in a box		
22	Problems		Lecture
UNIT-III	CLASICAL FREE ELECTRON THEORY AND		interspersed
	BAND THEORY OF SOLIDS		with
	CO3:Analyze the effect of temperature on Fermi-Dirac		discussions
	distribution function and summarize various types of		
	solids based on band theory. electron theory in the study		
	of electrical conductivity.		
23	Classical free electron theory, merits and demerits	15/03/20	
24	Quantum free electron theory	То	
25	Fermi Dirac distribution function and its temperature		
1974-6	dependendence	13/04/20	
26	Fermi energy, Density of states		
27	Blochs theorem, Kronig penney model		
28	Kronig penney model		
29	Energy bands- Classification of materials		

30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems		Lecture
UNIT-IV:	SEMICONDUCTUR PHYSICS	u. Yi	interspersed
Charles and the selection of the selecti	CO4: Classify the energy bands of semiconductors, out	I have been a supplied to the	with
	line the properties of N and P type semiconductors and		discussions
	identify the type of semiconductor using Hall effect.		
33	Introduction-Intrinsic semiconductor		
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
36	p-type and n-type-density of charge carriers	15/04/00	
37	Dependence of Fermi energy on carrier concentration and	15/04/20	
38	temperature, Hall effect,	To	
39	Hall co-efficient, Applications of Hall effect	04/05/20	
40	Drift and diffusion currents		Lecture
41	Einstein's Equation	-	interspersed
42	Problems		with
UNIT- V	MAGNETISM & DIELECTRICS		discussions
	CO5: Explain the applications of dielectric and		
	magnetic materials and apply the concept of magnetism		andrines Sudan andrines
	to magnetic devices.		
43	MAGNETISM: Introduction	06/05/20	
44	Magnetic dipole momentum, Magnetization-	То	
45	Magnetic susceptibility and permeability		
46	Origin of permanent magnetic moment	13/05/20	
47	Bohr Magneton -Classification of magnetic materials		1.74
3	(Dia, Para and Ferro)		Lecture
48	Soft and hard magnetic materials		interspersed
49	Applications of Ferromagnetic material		with
50	Problems		discussions
51	DIELECTRICS: Introduction,		
52	Dielectric polarization		
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic		
	(Quantitative),		
55	Orientation polarizations	14/05/20	•
56	Lorentz internal field	То	
57	Claussius Mossoti equation-	25/05/20	
58	Entrinsic SC's		
59	Drift & Diffusion		
60	Einstein's Equation		
61	Hall Effect & Problems		

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TENTATIVE LESSON PLAN: ES1213 DIGITAL LOGIC DESIGN

Course Title: DIGITAL LOGIC DESIGN					
Section:	Section: Sec I Date: 04/11/2020		Page No: 1 to 4		
				Approved By:	HOD
Tools: B	lack board, PPTs,				
S. No.		Topic		Date	Mode of Delivery
UNIT-I	DIGITAL SYSTE	MS AND BINARY NUM	BERS	7 1	
representa	ation and operations	different number system with this representation.		and subtraction, 2'	s complement
TB1: Dig		Morris Mano, Michael D	Ciletti, PEA.		
1	Digital Systems				
2	Binary Numbers				
3	Octal and Hexade	ecimal Numbers			
4	Complements of	Numbers	To a second	From: 07-02-2020	Lecture
5	Signed Binary No	umbers			interspersed with
6	Arithmetic additi	on and subtraction		To: 26-02-2020	discussions
7	4-bit codes: BCD	, EXCESS 3			
8	9's complement,	2421			
9	alphanumeric coo	les			
UNIT-II	CONCEPT OF	BOOLEAN ALGEBRA			
CO2: An	ability to understand	d the different switching al	gebra theorems and	apply them for logic	functions.
		Morris Mano, Michael D			
10	Basic Theorems				
11	Properties of Boo	olean algebra		1.00	
12	Boolean Function	18			
13	Canonical and St	andard Forms			
14	Minterms and Ma	axterms.			
15	Problems on sop	and pos			

36	T and D Flip Flops, Truth and Excitation Tables	and the second s	State of the state of the state of
37	Conversion of Flip Flops.		
UNIT-V	REGISTERS AND COUNTERS		
CO5: A	ble to design various sequential circuits starting from flip-	flop to registers and counters.	
TB2: Di	gital Logic and Computer Design, M. Morris Mano, P	EA.	
38	Registers		
39	Shift Registers	From: 26-05-2020	
40	Ripple Counters	To:	Online
41	Synchronous Counters	6-06-2020	
42	Ring Counter, Johnson Counter.		

TB1: Digital Design, 5/e, M. Morris Mano, Michael D Ciletti, PEA. TB2: Digital Logic and Computer Design, M. Morris Mano, PEA.

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TENTATIVE LESSON PLAN: R19ES1201 PROGRAMMING FOR PROBLEM SOLVING USING C

Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C

Section			Page No: 01 of 03	
	No: 00 Prepared By: SK. REHANA	Approved B	y: HOD	
Tools: B	Black board, PPTs, Moodle			
No. of	TOPIC	Date	Mode of	
Periods			Delivery	
UNIT-I	Introduction to C language			
COI: 1	o learn about the computer systems, computing environ and Structure of a C Program.	iments, developing of a	computer	
	ogramming for Problem Solving, Behrouz A. Forouzan.	Richard F Gilberg C	FNGAGE	
1	Computer Systems .	, rectaire Fromberg, C	ENGAGE	
2	Computing Environments			
3	Computer languages			
4	Creating and running Programs			
5	Computer Numbering System			
6	Storing Integers	Г	Lecture	
7	Storing Real Numbers	From:	Interspersed	
8	C Programs, Identifiers	6/2/2020	With	
9	Types, Variable		discussions	
10	Constants, Input/output	To		
11	Programming Examples	25/2/2020		
12	Scope, Storage Classes and Type Qualifiers	25/2/2020		
13	Expressions Precedence and Associativity			
14	Side Effects, Evaluating Expressions			
15	Type Conversion Statements			
16	Simple Programs			
17	Command Line Arguments			
18	Tutorial			
UNIT-II	Operators, Selection and Repetition			
	gain knowledge of the operators, selection, control state	ements and repetition	in C	
TB1: Pro	ogramming for Problem Solving, Behrouz A. Forouzan,	Richard F.Gilberg, Cl	ENGAGE	
		, , ,		
19	Exact Size Integer Types			
20	Logical Bitwise Operators			
21	Shift Operators			
22	Logical Data and Operators		Lecture	
23	Two Way Selection		interspersed	
24	Multiway Selection		with	
25	More Standard Functions	of the second second and the second		

26	Concept of Loop		discussions
27	Pretest and Post-test Loops	From	
28	Initialization and Updating	26/2/2020	
29	Event and Counter Controlled Loops	26/2/2020	
30	Loops in C	To	
31	Other Statements Related to Looping		
32	Looping Applications	11/3/2020	
33	Programming Example The Calculator Program		
35	Tutorial		
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-II	Arrays, String, Enum, Structure, Unions		Denvery
To learn	learn about the design concepts of arrays, strings, enumerated about their usage. ogramming for Problem Solving, Behrouz A. Forouzan, Richal Concepts, Using Array in C		
37	Array Application		
38	Two Dimensional Arrays		
39	Multidimensional Arrays	+	
40	Programming Example – Calculate Averages		
41	String Concepts, C String	-	
42	String Input / Output Functions .		
43	Arrays of Strings	From .	
44	String Manipulation Functions	12/3/2020	
45	String/ Data Conversion	-	
46	A Programming Example – Morse Code	To	Lecture
47	The Type Definition (Type def)	11/4/2020	interspersed
48	Enumerated Types	11/4/2020	with
49	Structure	-	
50	Unions	- `	discussions
51	Programming Application	_	
52	Tutorial	+	
UNIT-IV			
CO4: To Preproce	assimilate about pointers, dynamic memory allocation and kn		
No. of	TOPIC	Date	Mode of
Periods			Delivery
53	Introduction		
54	Pointers to pointers		
J-T			
55	Compatibility, L value and R value		Lecture interspersed

57	Pointer Arithmetic and Arrays	From	with
58	Memory Allocation Function		discussions
59	Array of Pointers	13/4/2020	
60	Programming Application	To	
61	Processor Commands		
62	Tutorial	25/4/2020	
	Files and Functions o assimilate about File I/O and significance of functions. rogramming for Problem Solving, Behrouz A. Forouzan, Richar	d F.Gilberg, CI	ENGAGE
63	Function in C	8)	
64	User Defined Functions .		
65	Inter-Function Communication	-	
_66	Standard Functions		
67	Passing Array to Functions	From	
68	Passing Pointers to Functions	Troin	
69	Recursion	27/4/2020	
70	Passing an Array to Function		Lecture
71	Files, Streams	То	interspersed
72	Standard Library Input / Output Functions	7/5/2020	with discussions
.73	Formatting Input / Output Functions .	7/3/2020	discussions
74	Character Input / Output Functions	•	
75	Text versus Binary Streams		
76	Functions for Files		
77	Converting File Type		
78	Designing, Structured Programs		
70	Tutorial		

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