

SIR C R REDDY COLLEGE FOR WOMEN, ELURU

2022-2023

Name of the Lecturer	P. SIVA KUMARI				
Name of the	PHYSICS				
Program	II BSc			IMPC+MPCS	
Title of the Course:	WAVE OPTICS			Hrs allotted:	60
Year	I YEAR	Semester	II	Course Code:	21-BS234
Section	II			Hours/Week	4+2

Unit No. & Name	Hour	Day	Date	Topic to be Covered	Methodology Adopted	Remarks
UNIT-1 INTERFERENCE OF LIGHT	1	THUR	06-01-2023	INTERFERENCE-Introduction,Conditions for interference of light	P1	-
	2	FRI	06-02-2023	Interference of light by division of wave front and amplitude, Phase change on reflection ,Stokes's treatment,lioyd's mirror	P1	-
	3	MON	06-05-2023	lab introduction	P1 &P2	-
	4	TUE	06-06-2023	AUDIO& VEDIO	P3	-
	5	WED	06-07-2023	Interference in thin films: plane parallel and wedge shaded films	P1	-
	6	THUR	06-08-2023	colours in thin films, Newton's rings in reflected light- theory and experiment	P1	-
	7	FRI	06-09-2023	Determination of wavelength of monochromatic light, Michelson interferometer and determination of wavelength	P1	-
	8,9	MON	06-12-2023	Practical-1 Refractive index of lens and a liquid-Boylle's method	P1 & P2	-
UNIT-2 DIFFRACTION OF LIGHT	10,11	THU	13-06-2023	DIFFRACTION OF LIGHT- introduction, types of diffraction,distinction between Fresnel and Fraunhofer diffraction	P1	-
	12	WED	14-06-2023	Fraunhofer diffraction at a single slit, plane diffraction grating	P1	-
	13	THUR	15-06-2023	Determination of wavelength of light using diffraction grating,Resolving power of grating	P1	-
	14	FRI	16-06-2023	DEBATE	P6	-
	15,16	MON	19-06-2023	Practical-1 Diffraction grating - minimum deviation	P1	-
	17	TUE	20-06-2023	SEMINAR	P5	-

UNIT-3 POLARISATION OF LIGHT	18	WED	21-06-2023	POLARISATION OF LIGHT- Methods of plane polarised light, polarisation of Reflection,(Brewster's law) Double refraction	P1	-
	19	THUR	22-06-2023	malus law,Nicol's prism, Nicol's prism as polariser and analyser	P1	-
	20	FRI	23/6/2023	Optical activity, Quarter wave plate,half wave plate	P1	-
	21,22	MON	26-06-2023	LAB - practical-3 Diffraction grating -Normal incidence	P1 & P2	-
	23	TUE	27-06-2023	Circularly and elliptically polarised light- production and detection	P1	-
	24	WED	28-06-2023	Laurent's half shade polarimeter: determination of specific rotation	P1	-
	25	FRI	30-06-2023	QUIZ	P7	-
	26,27	MON	07-03-2023	LAB- PRACTICAL-4 Dispersive power of a prism	P1&P2	-
UNIT-4 ABERRATIONS AND FIBER OPTICS	28	TUE	07-04-2023	ABERRATIONS AND FIBRE OPTICS ,Mono chromatic abberation	P1	-
	29	WED	07-05-2023	DEBATE	P6	-
	30	THUR	07-06-2023	spherical aberrations	P1	-
	31	FRI	07-07-2023	Methods of mimimizing spherical aberration	P1	-
	32,33	MON	07-10-2023	LAB- PRACTICAL-5 Resolving power of telescope	P1&P2	-
	34	TUE	07-11-2023	Coma ,Astigmatism	P1	-
	35	WED	07-12-2023	GROUP DISSCUSSION	P8	-
	36	THUR	13-07-2023	Distortion and curvature	P1	-
	37	FRI	14-07-2023	Chromatic aberration	P1	-
	38,39	MON	17-07-2023	LAB PRACTICA-6 Resolving power of grating	P1&P2	-
	40	TUE	18-07-2023	Achromatic doublet	P1	-
	41	WED	19-07-2023	Achromatism for two lenses (i) in contact and (ii)separated by a distance	P1	-
	42	THUR	20-07-2023	ASSIGNMENT	P4	-
	43	FRI	21-07-2023	Different types of fibres	P1	-
	44,45	MON	24-07-2023	REPETATION	P1&P2	-
	46	TUE	25-07-2023	principles of fibre communication	P1	-
47	WED	26-07-2023	Advantages of fibre optic communication	P1	-	

UNIT-5 LASERS AND HOLOGRAPHY	48	THUR	27-07-2023	LASERS AND HOLOGRAPHY: Introduction of LASERS	P1	-
	49	FRI	28-07-2023	SEMINAR	P5	-
	50,51	MON	08-01-2023	REPETATION	P1&P2	-
	52	TUE	08-02-2023	Population inversion	P1	-
	53	WED	08-03-2023	LASER principle ,Einstein coefficients	P1	-
	54	THUR	08-04-2023	AUDIO & VEDIO	P3	-
	55	FRI	08-05-2023	Types of lasers	P1	-
	56,57	MON	08-07-2023	REPETATION	P1&P2	-
	58	TUE	8/82023	He-Ne laser	P1	-
	59	WED	08-09-2023	ASSIGNMENT	P4	-
	60	THUR	08-10-2023	RUBY LASER	P1	-
	61	FRI	08-11-2023	Applications of LASERS	P1	-
	62,63	MON	14-08-2023	LAB-Repetition	P1&P2	-
	64	WED	16-08-2023	QUIZ	P7	-
	65	THUR	17-08-2023	Applications of Holography	P1	-
	66	FRI	18-08-2023	Problems on UNIT-1 Explanation	P1	-
	67,68	MON	21-08-2023	OBSERVATION CORRECTION	P1&P2	-
	69	TUE	22-08-2023	Problems on UNIT-II & UNIT-III	P1	-
	70	WED	23-08-2023	ASSIGNMENT	P4	-
	71	THUR	24-08-2023	Problems on UNIT-IV Explanation	P1	-
72	FRI	25-08-2023	Problems on UNIT-V Explanation	P1	-	

P. Siva Kumari
Signature of the Lecturer

K. Srinivasulu
Signature of the HOD

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Signature of the Principal

P1- Lecture	P2- Demonstration	P3- Audio,Video	P4- Assignment	P5- Seminar
P6- Debate	P7- Quiz	P8- Group Discussion	P9- Jam	P10- PPT

SIR C R REDDY COLLEGE FOR WOMEN, ELURU
Annual Curricular Plan for the Academic Year 2022 - 2023

Name of the Lecturer :	KAMMILI SIRISHA				
Name of the Department:	PHYSICS				
Program	II B.Sc			Group:	MPCS 2
Title of the Course:	ELECTRICITY MAGNETISM AND ELECTRONICS			Hrs allotted:	60
Year	II YEAR	Semester	IV	Course Code:	21-BS434-A
Section	II			Hours/Week	4 + 2


Unit No. & Name	Hour	Day	Date	Topic to be Covered	Methodology Adopted	Remarks
UNIT - 1 ELECTROSTATICS	1	FRI	24-03-2023	Electric field intensity due to infinite conducting sheet of charge , deduction of coulombs law from	P1	-
	2	SAT	25-03-2023	electric potential equipotential surfaces	P1	-
	3,4	MON	27-03-2023	Lab introduction	P1&P2	-
	5	TUE	28-03-2023	potential due to a uniformly charged sphere,Dielectrics concept,Capacitance of parallel plate capacitor	P1	-
	6	WED	29-03-2023	AUDIO&VEDIO	P3	-
	7	FRI	31-03-2023	Definition of intensity of electric field E , electric displacement D , electric polarization P Relation	P1	-
	8,9	MON	03-04-2023	LAB -Determination of AC frequency - sonometer	P1&P2	-
	10	TUE	04-04-2023	Dielectric constant and electric susceptibility .PROBLEMS based on above topics	P1	-


UNIT II - MAGNETOSTATI CS	11	MON	10-04-2023	LAB - PN JUNCTION DIODE	P1&P2	-
	12	TUE	11-04-2023	Magnetostatics introduction , Biot savarts law ,Magnetic field due to circular loop	P1	-
	13	WED	12-04-2023	Magnetic field due to solenoid,Amperes circuital law and its applications to solenoid , Hall effect	P1	-
	14	THU	13-04-2023	SEMINAR	P5	-
	15	SAT	15-04-2023	Electro magnetic induction - faradays laws,Lenz's law , self induction	P1	-
	16,17	MON	17-04-2023	LAB - ZENER DIODE	P1&P2	-
	18	TUE	18-04-2023	Mutual induction , mutual induction of two coils ,Self inductance of a long solenoid,Eddy currents	P1	-
	19	WED	19-04-2023	DEBATE	P6	-
	20	THU	20-04-2023	PROBLEMS based on above topics ,Guass law	P1	-
	UNIT III - ALTERNATING CURRENTS	21	FRI	21-04-2023	SEMINAR	P5
22 23		MON	24-04-2023	LAB DEMORGANS THEOREMS	P1&P2	-
24		TUE	25-04-2023	UNIT III : ALTERNATING CURRENTS INTRODUCTION	P1	-
25		WED	26-04-2023	QUIZ	P7	-
26		FRI	28-04-2023	Relation between current and voltage LR , Phasor and vector diagram	P1	-
27		SAT	29-04-2023	LCR Series resonant circuitLCR parallel resonant circuit	P1	-
28,29		MON	01-05-2023	LAB HALF ADDER AND FULL ADDER	P1&P2	-
30		TUE	02-05-2023	Q factor and power factor	P1	-
31		WED	03-05-2023	Electromagnetic waves - maxwells equations idea of displacement curent ,Maxwells equations derivations	P1	-

	32	FRI	05-05-2023	ASSIGNMENT	P4	-
	33	SAT	06-05-2023	PROBLEMS based on above topics	P1	-
	34,35	MON	05-06-2023	LAB UNIVERSAL GATES, Universal gates & verification of truth tables .	P1&P2	-
	36	TUE	06-06-2023	Transverse nature of electro magnetic waves	P1	-
	37	WED	07-06-2023	GROUP DISCUSSION	P8	-
	38	FRI	09-06-2023	Velocity of wave equation using maxwells relation in vaccume, Poynting's theorem statement and proof	P1	-
UNIT IV BASIC ELECTRONIC DEVICES	39	SAT	10-06-2023	UNIT IV BASIC ELECTRONIC DEVICES Introduction	P1	-
	40,41	MON	12-06-2023	LAB SONOMETER REPETITION	P1&P2	-
	42	TUE	13-06-2023	PN junction diode, Zener diode, light emitting diode	P1	-
	43	WED	14-06-2023	ASSIGNMENT	P4	-
	44	FRI	16-06-2023	I V Characteristics	P1	-
	45	SAT	17-06-2023	Zener diode as a voltage regulator	P1	-
	46,47	MON	19-06-2023	LAB PN JUNCTION DIODE REPETITION	P1&P2	-
	48	TUE	20-06-2023	DEBATE	P6	-
	49	WED	21-06-2023	CB ,CE Configuraion, Transistors and its operations	P1	-
	50	FRI	23-06-2023	CC configuration	P1	-
	51	SAT	24-06-2023	QUIZ	P7	-

	52,53	MON	26-06-2023	LAB ZENER DIODE REPITION	P1&P2	-
	53	TUE	27-06-2023	I/P Characteristics of a transistor in CE mode	P1	-
	54	WED	28-06-2023	Transistor as a amplifier , Problems based on above said topic ,Number system	P1	-
UNIT V DIGITAL ELECTRONICS	55	FRI	30-06-2023	Unit v Digital electronics - introduction	P1	-
	56	SAT	01-07-2023	AUDIO & VEDIO	P3	-
	57,58	MON	03-07-2023	LAB DEMORGANS THEOREMS REPITION	P1&P2	-
	59	TUE	04-07-2023	Conversion of binary to decimal systems	P1	-
	60	WED	05-07-2023	Binary addition subtraction (1's and 2's compliment methods),Laws of boolean algebra	P1	-
	61	FRI	07-07-2023	SEMINAR	P5	-
	62,63	MON	10-07-2023	LAB UNIVERSAL GATES REPITION	P1&P2	-
	64	TUE	11-07-2023	Demorgans laws statements and proof	P1	-
	65	WED	12-07-2023	Basic logic gates	P1	-
	66	FRI	14-07-2023	NAND and NOR as universal gates	P1	-
	67	SAT	15-07-2023	DEBATE	P6	-
	68	MON	17-07-2023	HALF ADDER circuit,	P1	-
	69	TUE	18-07-2023	Full adder circuit,	P1	-

	70	WED	19-07-2023	ProBLEMS based on above topics	P1	-
	71	FRI	21-07-2023	GROUP DISCUSSION	P8	-
	72	SAT	22-07-2023	Remidial class	P1	-
	73,74	MON	24-07-2023	PRACTICAL CALUCULATION	P1&P2	-


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Lecturer


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P1- LECTURE

P2- DEMONSTRATION

P3- AUDIO & VEDIO

P4- ASSIGNMENT

P5- SEMINAR

P6- DEBATE

P7-QUIZ

P8- GROUP DISCUSSION

P9- JUST A MINUTE

P10- PPTS

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Annual Curricular Plan for the Academic Year 2022 - 2023

Name of the Lecturer:	B.DURGA PRASANNA			
Name of the Department:	PHYSICS			
Program	II B.SC		Group:	MPC
Title of the Course:	MODERN PHYSICS		Hrs allotted:	60
Year	II B.SC	Semester	IV	
Section	II		Course Code:	21 BS434B
			Hours/Week	4+2

Unit No. & Name	Hour	Day	Date	Topic to be Covered	Methodology Adopted	Remarks
UNIT -I ATOMIC & MOLECULAR PHYSICS	1	FRI	24-03-2023	Vector Atom model	P1	-
	2	SAT	25-03-2023	Stern gerlach Experiment , Quantum numbers	P1	-
	3	MON	27-03-2023	Assignment	P4	-
	4	TUE	28-03-2023	Angular momentum, Coupling Schemes,Spectral terms ¬ations	P1	-
	5,6	WED	29-03-2023	LAB - Energy band gap of Semiconductor diode	P1&P2	-
	7	FRI	31-03-2023	Selection rules,Intensity rules,Fine Structure	P1	-
	8	SAT	01-04-2023	Zeeman effect, Experimental arrangement	P1	-
	9	MON	03-04-2023	Raman effect, experimental arrangement	P1	-
	10	TUE	04-04-2023	Quantum Theory of Ramman effect, Applications	P1	-
	UNIT -II MATTER WAVES AND UNCERTAINTY PRINCIPLE	11	MON	10-04-2023	Matter waves , de Broglie's hypothesis, wavelength of matter	P1
12		TUE	11-04-2023	Audio &Vedio	P3	-
13,14		WED	12-04-2023	LAB -Energy band gap of Intrinsic Semiconductor diode	P1&P2	-
15		SAT	15-04-2023	Davision & Germer's Experiment	P1	-
16		MON	17-04-2023	Phase and Group Velocity	P1	-
17		TUE	18-04-2023	Heisenberg's Uncertainty principle	P1	-
18,19		WED	19-04-2023	LAB - Determination of Plancks constant	P1&P2	-
20		FRI	21-04-2023	Gamma ray Microscope, Bohr's Complementary Principle	P1	-

UNIT III QUANTUM MECHANICS	21	MON	24-04-2023	Basic Postulates of Quantum mechanics	P1	-
	22	TUE	25-04-2023	Schrodinger time independent & time dependent wave equation	P1	-
	23,24	WED	26-04-2023	LAB -e/m of an electron - Thomson method	P1&P2	-
	25	FRI	28-04-2023	Physical interpretation of wave function , Eigen function, values	P1	-
	26	SAT	29-04-2023	1-D potential box	P1	-
	27	MON	01-05-2023	3-D potential box ,Tunnel effect	P1	-
	28	TUE	02-05-2023	Group Discussion	P8	-
	29,30	WED	03-05-2023	LAB - Determination of M & H	P1&P2	-
	31	FRI	05-05-2023	Debate	P6	-
UNIT IV NUCLEAR PHYSICS	32	SAT	06-05-2023	General Properties of Nuclei, Binding energy	P1	-
	33	MON	08-05-2023	Characteristics of nuclear forces , Yukawa meson theory	P1	-
	34	TUE	09-05-2023	Liquid drop model, Shell model	P1	-
	35,36	WED	10-05-2023	LAB -Repetations	P1&P2	-
	37	TUE	06-06-2023	G M counter , Cloud chamber	P1	-
	38,39	WED	07-06-2023	LAB -Repetations	P1&P2	-
	40	FRI	09-06-2023	Audio & Vedio	P3	-
	41	MON	12-06-2023	Solid state detector , Problems	P1	-
	42	TUE	13-06-2023	Elementary particles & their classification	P1	-

UNIT V NANO MATERIALS AND SUPER CONDUCTIVITY	43,44	WED	14-06-2023	LAB -Repetations		
	45	FRI	16-06-2023	Group Discussion	P1&P2	-
	46	SAT	17-06-2023	Classification Nano materials	P8	-
	47	MON	19-06-2023	Fullerence	P1	-
	48	TUE	20-06-2023	CNT, Graphene	P1	-
	49,50	WED	21-06-2023	LAB -Observation correction	P1	-
	51	FRI	23-06-2023	Properties of nano materials ,Applications	P1&P2	-
	52	SAT	24-06-2023	Seminar	P1	-
	53	MON	26-06-2023	Introduction to Superconductivity	P5	-
	54	TUE	27-06-2023	Experimental results	P1	-
	55,56	WED	28-06-2023	LAB -Observation correction	P1	-
	57	FRI	30-06-2023	Critical magnetic field	P1&P2	-
	58	SAT	01-07-2023	Meissner effect, Isotope effect	P1	-
	59	MON	03-07-2023	Type I & II Superconductors ,BCS theory	P1	-
	60	TUE	04-07-2023	Quiz	P1	-
	61,62	WED	05-07-2023	LAB -Model exam	P7	-
	63	FRI	07-07-2023	Applications of Superconductors	P1&P2	-
	64	MON	10-07-2023	Problems on Unit-1,2	P1	-
	65	TUE	11-07-2023	Assignment	P1	-
	66,67	WED	12-07-2023	LAB -Record correction	P4	-
	68	FRI	14-07-2023	Problems on unit-3	P1&P2	-
	69	SAT	15-07-2023	Assignment	P1	-
	70	MON	17-07-2023	Problems on unit-4	P4	-
71	TUE	18-07-2023	Problems on unit-5	P1	-	
72,73	WED	19-07-2023	LAB -Record correction	P1	-	
74	FRI	21-07-2023	Assignment	P1&P2	-	
75	SAT	22-07-2023	Revision	P4	-	
				P1	-	

B. Durga prasad
Signature of the Lecturer

K. S. S. S. S.
Signature of the HOD

Signature of the Principal

P1- Lecture	P2- Demonstration	P3- Audio, Video	P4- Assignment	P5- Seminar
P6- Debate	P7- Quiz	P8- Group Discussion	P9- Jam	P10- PPT

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