CLASS: III B.Sc. (MPC and MPCS) SEMISTER-VI

PAPER: Analog and Digital Electronics

I)epartm	ent :P	Physics CLASS: III B.										
			Name of the L	ecturer : D	r. K. Srini	vasa I	Rao, N	I.Sc.,	M.Phil., P	h.D	ACTIVI	ITV	
		<u> </u>	Tvaine or the		CURRI	CULAR A	ACTVITY		CO-CURI	RICULAR			KS
SEKIAL NUMBER	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	YEAR: 2019-20
			ED.										
MON	3 RD WEEK		FET-Construction, Working, characteristics and uses; MOSFET-enhancement MOSFET	ş <i>v</i> :	Teaching Class	3	Yes		Ward Counseli ng,		Yes		
			Construction and working, Drain characteristics of MOSFET,			-					 		
2	4th WEEK	3	applications of MOSFET,Photo electric devices: Structure and operation, characteristics		Teaching Class	3							
	5 th	2	Spectral, response and application of	f	Teaching Class	1	Yes		Guest Lecture	1	Yes		YEAR: 2019-2
	WEEK		LDR, LED and LCD		V					_			1 EAR. 2017 2
MO	NTH: DE	CEM	BER			Τ-	T	T	T			1	
4	l ST WEEK	3	Operational Amplifiers: Characteristics of ideal and practical Op-Amp (IC 741), Basic differential amplifiers	1	Teaching Class	3	Yes					-	
5	2 ND WEEK	4	Op-Amp supply voltage, IC identification, Internal blocks of Op-Amp, its parameter off set voltages and currents, CMRR, slew rate, concept of virtual ground.	,	Teaching Class	4	Yes	3	Ward Counse ng,	li 	Yes	5	

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6	3 rd WEEK		I MID Examinations								
7	4th WEEK	3	Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier	Teaching Class	9 3	Yes	Ward Counseli ng	i	Yes		
8	5 th WEEK	2	amplifier, difference amplifier, comparator, integrator, differentiator.	Teaching Class	2	Yes					
MON	NTH: JAN	UAR'	.Y							_	YEAR: 2019-
9	I ST WEEK	3	Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders	Teaching Class	3	Yes	Guest Lecture,	1	Yes		1 DAM. 2017-
10	2 ND WEEK	3	Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates).	Teaching Class	3	Yes	Study Projects		Yes	34	
11	3 RD WEEK		PONGAL HOLIDAYS								
12	4 TH WEEK	3	IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator.	Teaching Class	3	Yes					
ION	TH: FEBR	RUAP	RY							-	VEAD- 2010
14	1 ST WEEK		Sequential digital circuits: Flip- flops, RS, Clocked SR	Teaching Class	3	Yes			$\overline{}$		YEAR: 2019-2
15	2 ND WEEK	3	JK, D, T, Master-Slave, Flip- flop,	Teaching Class	3	Yes	Quiz	1	Yes		
16	3 RD WEEK	2 1	Design of code converter, BCD to 7 segment	Teaching Class	2	Yes		+	+	-	
17	4 TH WEEK	2 I	II MID Examinations	Teaching Class	2	Yes		+			

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18	l ST WEEK	4	binary/BCD to gray, gray to binary/BCD ,design of counters using state machine.	Teaching Class	2	Yes	Study Project	Yes		•		
19	2 ND WEEK	2	REVESION	Teaching Class	2	Yes	Group Discussio n	Yes				
20	3 RD WEEK		SEMESTER END EXAMINATIONS	Teaching Class	1	Yes						
21	4 TH WEEK		SEMESTER END EXAMINATIONS			34						
MON	TH: APR	IL					 	 	!	 	YE	AR: 2019-20
22	1 ST WEEK		SEMESTER END EXAMINATIONS									
23	2 ND WEEK		PRACTICAL EXAMINATIONS							 		
24	3 rd WEEK		PRACTICAL EXAMINATIONS					1		 		

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srimmana Rado

M.Sc., M.Phill., Ph.D.

Head Department of Physics

V.S.M. College - Ramachandrapurph

East Godavan DL (A.P. 527)

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
RAMACHANDRAPURAM-533 255, (E.G.Dt.)

CURRICULUM PLAN 2019-20

Department: Physics

PAPER: V - Electricity, Magnetism and Electronics

CLASS: III B.Sc.

Name of the Lecturer: Dr. K. Srinivasa Rao, M.Sc., M.Phil., Ph.D

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l	∞3	пi			CURRI	CULAR A				RICULAF	R ACTIVI		10
SERIAL	MONTH	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MOI	NTH: JUNE	Ε											
1	2 RD WEEK	2	Introduction of Static Electricity, Coulom's law		Teaching Class	2							
2	3 RD WEEK	2	Electric lines of force, Electric Flux, Gauss law statement, proof		Teaching Class	2							
3	4 TH WEEK	3	Gauss law applicatins E due to Uniformly charged sphere. E due to infinite conducting sheet of charge.	₹.	Teaching Class	2			Classroom Seminar	1			
MON	TH: JULY												
4	l ST WEEK	2	Electrical potential – equipotential surfaces- potential due to i) a point charge, ii) charged spherical shell	Electrification	Teaching Class	2			Guest Lecture	1			
5	2 ND WEEK		Electric dipole moment and molecular polarizability- Electric displacement D, electric polarization P	Bad conductor	Teaching Class	3			Ward Counseling				
6	3 RD WEEK	3	Relation between D, E and P- Dielectric constant and susceptibility. Boundary conditions at the dielectric surface.	Related problems	Teaching Class	3			Book Reviews	1			
7	4 TH WEEK	2	MID I EXAMINATIONS		_								
MON	TH: AUGU	ST											

		T	Diot-Savart's law, explanation and	1	Topobine		T			Т	 1
8	l ST WEEK		calculation of B due to long straight wire, a circular current loop and solenoid – Hall	Freq. variations	Teaching Class Assignment	2		QUIZ			
9	1 ST WEEK	2	Faraday's law-Lenz's law- Self and mutual inductance, coefficient of coupling,		Teaching Class Assignment	2					
10	2 ND WEEK	3	calculation of self inductance of a long solenoid, energy stored in magnetic field. Transformer - energy losses - efficiency.	Applications	Teaching Class	2		Ward Counseling	1		
11	3 RD WEEK	3	current and voltage in LR and CR circuits, vector diagrams, LCR series and parallel resonant circuit, Q –factor, power in ac circuits		Teaching Class	3			1		
12	4 TH WEEK	3	Idea of displacement current - Maxwell's equations (integral and differential forms) (no derivation), Maxwell's wave equation (with derivation).	V rou production	Teaching Class	3		Field Trip			
MON	TH: SEPT	ЕМВ	ER								
13	I ST WEEK		Pointing theorem (statement), production of electromagnetic waves (Hertz experiment)		Teaching Class	1			1		
14	^{2ST} WEEK	1	PN junction diode, Zener diode, I-V characteristics, PNP and NPN transistors, CB, CE and CC configurations –Relation between alha, beta and gamma,		Teaching Class	1			1		
15	3ND WEEK	3	MID II Examinations								
16	4 TH WEEK	3	as an amplifier.Number systems - Conversion of binary to decimal system and vice versa.		Teaching Class	2			1		

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17	^{5TH} WEEK		DASARA HOLIDAYS							
MON	тн: ост	OBER								
18	Ind WEEK	2	Binary subtraction (2's complement methods).Laws of Boolean algebra - De Morgan's laws-statement and proof,	Teaching Class	1		Study Projects	1	!	
19	^{2nd} WEEK	2	Basic logic gates, NAND and NOR as universal gates, exclusive-OR gate, Half adder and Full adder	 Teaching Class	2		Class Room Seminars	1		
20	^{3TH} WEEK		REVISION							
MON	TH: NOVI	EMBE	R							:
22	t st WEEK		SEMESTER END EXAMINATIONS				-			

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srivervasa Rao
M.Sc., M.Phil., Ph.D.
Head Department of Physics
V.S.M. College - Ramachandraphren
Fast Godavan Dt. (A.P. 527)

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A) RAMACHANDRAPURAM-533 255, (E.G.Dt.)

CURRICULUM PLAN - 2019-20

Department:Physics

CLASS: II B.Sc. (MPC and MPCS) SEMISTER-IV

PAPER: Thermodynamics & Radiation Physics

			Name	of the Lecture	er : Dr. K. Srin	ivasa l	Rao				<u> </u>		
	∞	ABLE		ADDITIONAL	CURRICU	JLAR AC	ΓVΙΤΥ		CO-CURI	RICULAF	ACTIV	TY	
SERIAL	MONTH	HOURS AVAILABLE	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	JE NOT, ALTERNATE DATE	REMARKS
MOI	NTH: NOV	EMB	ER				•	•					YEAR: 2019-20
1	3 RD WEEK	4	Introduction –Deduction of Maxwell's law of distribution of molecular speeds, experimental verification		Teaching Class	4	Yes		Ward Counseling,		Yes		
2	4th WEEK	4	path - Viscosity of gases-thermal conductivity-diffusion of ,Introduction- Isothermal and adiabatic process.		Teaching Class	4							
3	5 th WEEK	2	Reversible and irreversible processes- Carnnot's engine and its efficiency		Teaching Class	1	Yes		Guest Lecture	1	Yes		
MON	TH: DECE	МВЕ	R		<u> </u>								YEAR: 2019-20
4	l ST WEEK	3	thermodynamics. Kelvin's and Claussius statements-Entropy, physical significance –Change in entropy in reversible and irreversible processes		Teaching Class	3	Yes						
5	2 ND WEEK	4	Entropy and disorder-Entropy of Universe-Temperature-Entropy (T-S) diagram and its uses - Change of entropy of a perfect gas- change of entropy when ice changes into steam.		Teaching Class	4	Yes		Ward Counseling,		Yes		

 3^{1d} I MID Examinations WEEK Thermodynamic potentials-Derivation of Maxwell's thermodynamic relations-Clausius-Clayperon's Ward 4th equation-Derivation for ratio of Teaching Class Yes 4 Yes Counseling WEEK specific heats-Derivation for difference of two specific heats for perfect gas. Joule Kelvin effect-expression for 5th Teaching Class 2 Yes Joule Kelvin coefficient for perfect 8 WEEK and vander Waal's gas. YEAR: 2019-20 **MONTH: JANUARY** Introduction-Joule Kelvin effect-Porous plug experiment - Joule 1ST Guest expansion-Distinction between Teaching Class Yes 3 Yes 9 Lecture. **WEEK** adiabatic and Joule Thomson expansion Expression for Joule Thomson cooling-Liquefaction of helium, 2^{ND} Study Teaching Class Yes Yes 10 Kapitza's method-Adiabatic **Projects** WEEK demagnetization, Production of low temperatures RD PONGAL HOLIDAYS WEEK Applications of substances at lowtemperature-effects of chloro and $\mathbf{4}^{\mathrm{TH}}$ fluoro carbons on ozone layer.Blackbody-Teaching Class 3 Yes **WEEK** Ferry's black body-distribution of energy in the spectrum of black body

						_	T-		1	
13	5 th WEEK	1	Wein's displacement law, Wein's law,	Teaching Class	1					
MON	TH: FEBR	UAR	Y							YEAR: 2019-20
14	l ST WEEK	4	Rayleigh-Jean's law-Quantum theory of radiation-Planck's law-Measurement of radiation	Teaching Class	4	Yes				
15	2 ND WEEK	4	Types of pyrometers-Disappearing filament optical pyrometer- experimental determination – Angstrompyrheliometer-	Teaching Class	3	Yes	Quiz	1	Yes	
16	3 RD WEEK	2	Determination of solar constant, Temperature of Sun.	Teaching Class	2	Yes				
17	4 TH WEEK	2	II MID Examinations							

MONTH: MARCH
YEAR: 2019-20

18	l ST WEEK	2	REVESION		Teaching Class	2	Yes	Study Project	Yes		
19	2 ND WEEK	2	REVESION		Teaching Class	2	Yes	Group Discussion	Yes		
20	3 RD WEEK		SEMESTER END EXAMINATIONS	- "	Teaching Class	1	Yes				
21	4 TH WEEK		SEMESTER END EXAMINATIONS								

MONTH: APRIL

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Dr. M. Vefmorava Rud

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Hond Doppdment of Physics

V.S.M. College - Romathandrer

Fast Rodavan In 19 F

YEAR: 2019-20

PRINCIPAL, V.S.W. COLLEGE (A)
RAMACHANDRAPURAM-533 255, (E.G.Dt.)

CLASS: I B.Sc. SEMESTER-I

Department : Physics

PAPER: I -Mechanics and Properties of Matter

			Name of the Lectu	rer : R.Nag	eswararao M	l.Sc.(Tech.)	B.Ed.,						
	প্র	(2)		ADDITIONAL		RRICULAR	ACTVITY		CO-CURI	RICULAF			ی
SERIAL	MONTH &	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: JUNE												
1	3 RD WEEK	4	Scalar and vector fields. gradient of a scalar field and its physical significance. Divergence with derivations and physical interpretation.		Teaching Class	4	YES						
2	4 TH WEEK	4	curl of a vector field Vector integration (line, surface and volume).		Teaching Class	4	YES			!			
MON	TH: JULY								ň.				
3	l ST WEEK	3	Statement and proof of Gauss and Stokes theorems.	1	Teaching Class	3	YES						
4	2 ND WEEK		Laws of motion, motion of variable mass system, Equation of motion of a rocket. Conservation of energy and momentum.		Teaching Class	4	YES		Ward Counseling		YES		
5	3 RD WEEK	4	Collisions in two and three dimensions, Concept of impact parameter, scattering cross- section,		Teaching Class Assignment	3	YES		Book Reviews		YES		
6	4 TH WEEK	3	I MID Examinations										

MONTH: OCTOBER

MON	TH: OCTO	BEF	(
17	1 ST WEEK	2	Galilean relativity. absolute frames. Michelson- Morley experiment. negative result.	We	Teaching Class	2	YES				
18	2 ND WEEK	2	Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction	3	Teaching Class	3	YES	Class Room Seminars	1	YES	
19	3 RD WEEK	3	Addition of velocities, mass-energy relation. Concept of four-vector formalism.		Teaching Class	3	YES				
20	4 th WEEK		SEMESTER END EXAMINATIONS								
MON	TH: NOVE	MBI	ER	594						10. D. 10.	
21	1 ST WEEK		SEMESTER END EXAMINATIONS	ř.							
22	2 ND		PRACTICAL EXAMINATIONS					- 1			

R NO SCHOOL SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
RAMACHANDRAPURAM-533 255, (E.G.D.)

CURRICULUM PLAN - 2019-20

Department: Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

PAPER: Waves & Oscillations

			Name of the Lect	urer : R.NAG	ESWARA RAO	, M.S	:.(Tec	h.), B.I	Ed				
					CURRICU		VITY		CO-CURR	ICULAR			
SERIAL NUMBER	MONTH & WEEK	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	
MON	TH: NOVE	EMBE	R										YEAR: 2019-20
1	4th WEEK	4	Simple harmonic oscillator, and solution of the differential equation— Physical . characteristics of SHM		Teaching Class	4							
2	5 th WEEK	3	torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g'		Teaching Class	2	Yes		Guest Lecture	1	Yes		
MON	TH: DECE	MBE	R										YEAR: 2019-20
3	1 ST WEEK		combination of two mutually perpendicular simple harmonic vibrations of same frequency.		Teaching Class	3	Yes						
4	2 ND WEEK	4	Lissajous figures, Damped harmonic oscillator, solution of the differential equation of damped oscillator.		Teaching Class	4	Yes	_	Ward Counseling,		Yes		
5	3 rd WEEK		I MID Examinations										
6	4th WEEK	2	Energy considerations.Relaxation time quality factor		Teaching Class	2	Yes		Ward Counseling		Yes		
7	5 th WEEK	2	differential equation of forced oscillator and its solution. logarithmic decrement.	<u>.</u>	Teaching Class	2	Yes						

18	2 ND WEEK	2	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.	Teaching Class	2	Yes	 Group Discussion	Yes	-
19	3 RD WEEK	1	SEMESTER END EXAMINATIONS				 	 	
20	4 TH WEEK		SEMESTER END EXAMINATIONS	 					
MON	TH: APRI	L		 				 	 YEAR: 2019-20
21	1 ST		SEMESTER END EXAMINATIONS						
	WEEK		EXAMINATIONS	 				 	
22	2 ND WEEK		PRACTICAL EXAMINATIONS				 	 	

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SIGNATURE OF THE DEPARTMENT I/C

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SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A. RAMACHANDRAPURAM-533 255, (E.G.Dt.)

CURRICULUM PLAN - 2018 - 19

Department:Physics

CLASS: III B.Sc. (MPC and MPCS) SEMISTER-VI

PAPER: Analog and Digital Electronics

·	<u> </u>		Name of the L	ecturer : D	r. K. Srin	ivasa	Rao, l	M.Sc.,	M.Phil.,	Ph.D			
		BLE			CURF	ICULAR	ACTVIT	Y	CO-CUR	RICULA	R ACTIV	/ITY	
SERIAL NIMBER	MONTII & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	IIOURS Allotted	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
МО	NTH: NO	√EME	BER										YEAR: 2018-19
1	3 RD WEEK	3	FET-Construction, Working, characteristics and uses; MOSFET-enhancement MOSFET Construction and working,		Teaching Class	3	Yes		Ward Counseli ng,		Yes		
2	4th WEEK	3	Drain characteristics of MOSFET, applications of MOSFET, Photo electric devices: Structure and operation, characteristics		Teaching Class	3					7.7		
3	5 th WEEK	2	Spectral response and application of LDR, LED and LCD		Teaching Class	1	Yes		Guest Lecture	1	Yes		
МО	NTH: DEC	ЕМВ	ER										YEAR: 2018-19
4	l ST WEEK	3	Operational Amplifiers: Characteristics of ideal and practical Op-Amp (IC 741), Basic differential amplifiers		Teaching Class	3	Yes				آيو		
5	2 ND WEEK	4	Op-Amp supply voltage, IC identification, Internal blocks of Op-Amp, its parameter off set voltages and currents, CMRR, slew rate, concept of virtual ground.		Teaching Class	4	Yes		Ward Counseli ng,		Yes		

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6	3 rd WEEK		Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier	Teaching Class	3		Ward Counseli ng		YES		
7	4th WEEK	3	I MID Examinations								993
8	5 th WEEK	2	amplifier, difference amplifier, comparator, integrator, differentiator.	Teaching Class	2	Yes			العج		
МО	NTH: JAN	UAR	Y								YEAR: 2017-18
9	l ST WEEK	3	Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders	Teaching Class	3	Yes	Guest Lecture,	1	Yes		
10	2 ND WEEK	3	Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates).	Teaching Class	3	Yes	Study Projects	_	Yes		
11	3 RD WEEK		PONGAL HOLIDAYS								
12	4 TH WEEK	3	IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator.	Teaching Class	3	Yes			五		
МО	NTH: FEB	RUA	RY								YEAR: 2018-19
14	l ST WEEK	3	Sequential digital circuits: Flip- flops, RS, Clocked SR	Teaching Class	3	Yes			À		
15	2 ND WEEK		II MID Examinations								
16	3 RD WEEK	3	JK, D, T, Master-Slave, Flip- flop,	Teaching Class	3	Yes	Quiz	1	Yes		
17	4 TH WEEK	2	Design of code converter, BCD to 7 segment	Teaching Class	2	Yes			20	न वर्ष	

MONTH: MARCH

18	l ST WEEK	2	binary/BCD to gray, gray to binary/BCD ,design of counters using state machine.	Teaching Class	2	Yes	Study Project	ì	18.0				
19	2 ND WEEK	2	REVESION	Teaching Class	2	Yes	Group Discussio n		3				
20	3 RD WEEK		SEMESTER END EXAMINATIONS	Teaching Class	1	Yes							
21	4 TH WEEK		SEMESTER END EXAMINATIONS										
MON	NTH: APR	RIL	·									YEA	R: 2018-19
22	1 ST WEEK		SEMESTER END EXAMINATIONS			23					_		
23	2 ND WEEK		PRACTICAL EXAMINATIONS		:					3			
24	3 rd WEEK		PRACTICAL EXAMINATIONS										

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

M.SG. M. FIM. Ph.D.

Head Department of Physics

V.SiM. College - Ramachandrapuram
East Godavan Dt /A.P 533 255

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
RAMACHANDRAPURAM-533 255, (E.G.Dt.)

Department : Physics

CURRICULUM PLAN - 2018 - 19
CLASS: III B.Sc. (MPC and MPCS) SEMISTER-VI

PAPER: Analog and Digital Electronics

			N	e of the Lec	hurar · V	NAG	ARAR	U.M.	Sc.,				
			Nam	e of the Dec	CURR	ICULAR.	ACTVITY	,	CO-CUR	RICULA	R ACTIV	ITY	
SERIAL	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS		1F NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	YEAR: 2018-19
MO	TH: NOV	EMB	ER										
1	3 RD WEEK	3	FET-Construction, Working, characteristics and uses; MOSFET-enhancement MOSFET Construction and working,		Teaching Class	3	Yes		Ward Counseli ng,		Yes		
2	4th WEEK	3	Drain characteristics of MOSFET, applications of MOSFET, Photo electric devices: Structure and operation, characteristics		Teaching Class	3							
3	5 th WEEK		Spectral response and application of LDR, LED and LCD		Teaching Class	1	Yes		Guest Lecture	1	Yes		217.77.4010.10
L	NTH: DEC	L											YEAR: 2018-19
4	1 ST WEEK	3	Operational Amplifiers: Characteristics of ideal and practical Op-Amp (IC 741), Basic differential amplifiers		Teaching Class	3	Yes				yes		
5	2 ND WEEK	4	Op-Amp supply voltage, IC identification, Internal blocks of Op-Amp, its parameter off set voltages and currents, CMRR, slew rate, concept of virtual ground.		Teaching Class	4	Yes	£	Ward Counseli ng,		Yes		

6	3 rd WEEK	8	Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier	Teaching Class	3	-		Ward Counseli ng		YES	
7	4th WEEK	3	I MID Examinations)						
,	5 th WEEK	2	amplifier, difference amplifier, comparator, integrator, differentiator.	Teaching Class	2	Yes				yes	YEAR: 2018-
10h	NTH: JAN	UAR'	.Y					,			,
9	yst WEEK	3	Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders	Teaching Class	3	Yes		Guest Lecture,	1	Yes	
10	2 ND WEEK	1	Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates).	Teaching Class	3	Yes	 	Study Projects		Yes	
11	3 RD		PONGAL HOLIDAYS				1		 '		
12	∆ [™]	3	IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator.	Teaching Class	3	Yes				Yes	YEAR: 2018
	ONTH: FEI	וופפי								 '	
14	ST	3	a 11 to 1 simplifies Flip	Teaching Class	3	Yes	<u> </u> '			yes	
15	2 ND	+-	II MID Examinations							yes	
16	RD	3	(IK I) (Master-Stave, I lip- liop,	Teaching Class	3	Yes	-	Quiz	1	Yes	
17	TH	7	Design of code converter, BCD to /	Teaching Class	2	Yes				yes	YEAR: 201

								1 1			 - 1	<u> </u>	
18	3 W	1 ST VEEK	2	binary/BCD to gray, gray to binary/BCD ,design of counters using state machine.		Teaching Class	2	Yes	Ħ	Study Project Group	Yes		
19	3	2 ND VEEK	2	REVESION		Teaching Class	2	Yes		Discussio n	Yes		
20	0 v	3 RD WEEK		SEMESTER END EXAMINATIONS	l	Teaching Class	1	Yes			yes		
2	1 V	4 TH WEEK		SEMESTER END EXAMINATIONS							yes		YEAR: 2018-19
M	ONT	 `H: APR									 		 TEAK: 2010-17
2	2	l ST WEEK		SEMESTER END EXAMINATIONS							yes		
2	23	2 ND WEEK		PRACTICAL EXAMINATIONS							Yes		
2	24	3 rd		PRACTICAL EXAMINATIONS							yes		

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. R. Srinivasa Rao

MiSt., M.Phil. Ph.D.

Wead Department of Physics

V.SrM. College - Ramachandrapuram
East Godavan Dt. (A.P. 533 255

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PRINCIPAL, V.S.M. COLLEGE (A) RAMACHANDRAPURAM-533 255, (E.G.Dt.)

CURRICULUM PLAN 2018 - 2019

Department : Physics

CLASS: II B.Sc. (MPC(EM) and MPCS2) SEMISTER-IV

PAPER: Thermodynamics & Radiation Physics

			Nama	f the Leature	. D CAIDADI	N/C	(TD) 3 1						
-		1 19	Name o	i ine Leciurer	: P.SAIBABU.			<u>). </u>					
١. ۵	- એ	LABI		ADDITIONAL	CURRIC	ULAR AC			CO-CUR	RICULA	R ACTIV		
SERIAL	MONTH	HOURS AVAILABLE	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MOI	NTH: NOVE	MBEF	.										*0
1	3 RD WEEK	4	Introduction -Deduction of Maxwell's law of distribution of molecular speeds, experimental verification		Teaching Class	4	Yes		Ward Counseling,		Yes		
2	4th WEEK	4	Transport phenomena – Mean free path - Viscosity of gases-thermal conductivity-diffusion of Introduction- Isothermal and adiabatic process.		Teaching Class	4					401		
3	5 th WEEK	2	Reversible and irreversible processes-Carnnot's engine and its efficiency		Teaching Class	1 1	Ýes		Guest Lecture	1	Yes		
MON	TH: DECEM	IBER											Mail Co.
4	1 ST WEEK		Carnot's theorem-Second law of thermodynamics. Kelvin's and Claussius statements-Entropy, physical significance -Change in entropy in reversible and irreversible processes		Teaching Class	3	Yes				yer	00	
5	2 ND WEEK		Entropy and disorder-Entropy of Universe-Temperature-Entropy (T-S) diagram and its uses - Change of entropy of a perfect gas- change of entropy when ice changes into steam.		Teaching Class	4	Yes		Ward Counseling,		Yes		

	6	3 rd WEEK		Thermodynamic potentials-Derivation of Maxwell's thermodynamic relations-Clausius-Clayperon's equation-Derivation for ratio of specific heats-Derivation for difference of two	Teaching class	4	Yes	ward counse	eling	74		
	7	4th WEEK	4	IMID EXAMINATIONS.						:		30.3
)	8	5 th WEEK	2	Joule Kelvin effect-expression for Joule Kelvin coefficient for perfect and vander Waal's gas.	Teaching Class	2	Yes			۲۷)		
) N	10N	TH: JANUA	RY									
	9	1 ST WEEK	3	Introduction-Joule Kelvin effect-Porous plug experiment - Joule expansion-Distinction between adiabatic and Joule Thomson expansion	Teaching Class	3	Yes	Guest Lecture,	1	Yes		
	10	2 ND WEEK		Expression for Joule Thomson cooling- Liquefaction of helium, Kapitza's method- Adiabatic demagnetization, Production of low temperatures	Teaching Class	4	Yes	Study Projects		Yes		
	11	3 RD WEEK		PONGAL HOLIDAYS								
	12	4 TH WEEK	3	Applications of substances at lowtemperature- effects of chloro and fluoro carbons on ozone layer,Blackbody-Ferry's black body-distribution of energy in the spectrum of black body	Teaching Class	3	Yes			Y S		
	13	5 th WEEK	1	Wein's displacement law, Wein's law,	Teaching Class	1				Yer		
M	ON7	ΓH: FEBRUA	RY									
	14	I ST WEEK		Rayleigh-Jean's law-Quantum theory of radiation- Planck's law-Measurement of radiation	Teaching Class	4	Yes			yer		
	15	2 ND WEEK		II MID Examinations								

			,									
)	16	3 RD WEEK	3	Types of pyrometers-Disappearing filament optical pyrometer-experimental determination – Angstrompyrheliometer-	Teaching Class	3	Yes	Quiz	1	Yes		
	17	4 TH WEEK	2	Determination of solar constant, Temperature of Sun.	Teaching Class	2	Yes			ግ ደያ		
	MON	TH: MARCI	H								 ± 100	NE Y
	18	1 ST WEEK	2	REVESION	Teaching Class	2	Yes	Study Project		Yes		
	19	2 ND WEEK	2	REVESION	Teaching Class	2	Yes	 Group Discussion		Yes		\dashv
	20	3 RD WEEK		SEMESTER END EXAMINATIONS	Teaching Class	1	Yes			Yer		_
	21	4 TH WEEK		SEMESTER END EXAMINATIONS							 	\dashv
1	MON	ΓH: APRIL						 			 	
	22	I ST WEEK		SEMESTER END EXAMINATIONS				57				
	23	2 ND WEEK		PRACTICAL EXAMINATIONS					$\neg \uparrow$	\dashv		\dashv
	24	3 rd WEEK	97	PRACTICAL EXAMINATIONS				 			 	-

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

M.Sc., M.Phil., Ph.D. Head Department of Physics

V.S.M. College Ramachandrapuram
East Godavan Dt (A.P. 533 255

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RAMACHANDRAPURAM-533 255, (E.G.Dt.)

CURRICULUM PLAN - 2018 - 19

Department: Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

PAPER: Waves & Oscillations

			Name of the Lect	urer : R.Nage	swararao M.Sc.	Tech)	, B.Ec	l.,					
-					CURRICUI	AR ACT	VITY		CO-CURR	ICULAR	ACTIVI		83
SERIAL NUMBER	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MOI	NTH: NOVE	EMBE	R										\$5 50 0 TY Negt 50
1	4th WEEK	4	Simple harmonic oscillator, and solution of the differential equation— Physical . characteristics of SHM		Teaching Class	4					40)		
2	5 th WEEK	3	torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g'		Teaching Class	2	Yes		Guest Lecture	1	Yes		44 JUNE 18
MO	NTH: DECE	EMBE	R										21 11 11
3	l st WEEK	3	combination of two mutually perpendicular simple harmonic vibrations of same frequency.		Teaching Class	3	Yes				44		
4	2 ND WEEK	4	Lissajous figures, Damped harmonic oscillator, solution of the differential equation of damped oscillator.		Teaching Class	4 يا	Yes 33 255		Ward Counseling,		Yes		
5	3 rd WEEK		I MID Examinations										
6	4th WEEK	2	Energy considerations.Relaxation time quality factor		Teaching Class	2	Yes		Ward Counseling		Yes		~
7	5 th WEEK	2	differential equation of forced oscillator and its solution. logarithmic decrement.		Teaching Class	2	Yes				Yes		

MON	TH: JANU	ARY								YEAR: 2017-1
8	1 ST WEEK		Complex vibrations Fourier theorem and evaluation of the Fourier coefficients.	Teaching Class	3	Yes	Guest Lecture,	1	Yes	
9	2 ND WEEK	4	Analysis of periodic wave functions- square wave, triangular wave.Longitudinal vibrations in bars.	Teaching Class	4	Yes	Study Projects		Yes	
10	3 RD WEEK		PONGAL HOLIDAYS							
11	4 TH WEEK	3	wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar	Teaching Class	3	Yes			Yes	
12	5 th WEEK	1	Transverse wave propagation along a stretched string.	Teaching Class	1				44	
MON	TH: FEBR	UAR	Υ				 			
13	l ST WEEK	4	General solution of wave equation and its significance, General solution of wave equation and its significance.	Teaching Class	4	Yes			YUS	
14	2 ND WEEK		II MID Examinations							
15	3 RD WEEK	3	Modes of vibration of stretched string clamped at both ends, Overtones,	Teaching Class	3	Yes	Quiz	1	Yes	
16	4 TH WEEK	2	energy transport, transverse impedance.	Teaching Class	2	Yes				
MON	NTH: MAR	CH					 			 3-1-3-
17	1 ST WEEK	2	Ultrasonics Ultrasonics, properties of ultrasonic	Teaching Class	2	Yes	Study Project		Yes	

								_					- 1
	18	2 ND WEEK	2	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.	Те	aching Class	2	Yes	Group Discussion	8	Yes		
	19	3 RD WEEK	1	SEMESTER END EXAMINATIONS									\downarrow
	20	4 TH WEEK		SEMESTER END EXAMINATIONS					 			 70° -±	
l N	10N	TH: APRI	L						 			 Late a	
	21	l ST WEEK		SEMESTER END EXAMINATIONS									_
	22	2 ND WEEK		PRACTICAL EXAMINATIONS									_
)	23	3 rd WEEK		PRACTICAL EXAMINATIONS									

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Dr. K. Srinivasa Rao

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V.S.M. College - Ramachandrapuram East Godavan Di IAIP 533 255

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CURRICULUM PLAN - 2018 - 19

	× ×	T	ni	Name of t	he Lecturer :	MPC and MPC	LAK	SHN	ΛΙ, Μ.	Sc	P/	APER	: Wa	ves & (Oscillation	18
FRIA	NUMBER MONTH 8		AVAILABLE	SYLLABUS TOPICS	ADDITIONAL	CURI	RICULA	R ACT	VITY		CO-CU	RRICUL	R ACTI	Viru	7	
	Σ	- 1	- 1		INPUTS / VALUES ADDITION	ACTIVITY	Jule	ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE		HOURS	7			KEMARKS
M	ONTH: NO	VEM				AC AC	=	ALLO	WHE	LTE	ACTIVITY	HOU	HET	FNO		CEMA
1	4th WEEK		e e	Simple harmonic oscillator, and olution of the differential quation— Physical . characteristics f SHM		Teaching Class	T	7						AE	29.7	
2	5 th WEEK	3 EMB		torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g'		Teaching Class	2	+	Yes		Guest Lecture	1	YU) Yes			
3	I ST WEEK	3	cor	mbination of two mutually pendicular simple harmonic rations of same frequency.		Teaching Class	3	Ty	'es						7 - 5	•
	2 ND WEEK	4	Lis osci	ssajous figures, Damped harmonic illator, solution of the differential ation of damped oscillator.	7	eaching Class	4	Ye	95		Vard	+	'es	-		
	3 rd WEEK		I MI	ID Examinations	-			-		Cou	nseling,		es			
-	4th WEEK	2	Ener time	gy considerations.Relaxation quality factor	Te	eaching Class			-	-						
	5 th WEEK	2	d Oscill	lifferential equation of forced ator and its solution. logarithmic decrement.		aching Class	2	Yes	-		ard seling	Ye	s			

	CT.	T	Complex vibrations Fourier theorem		_						YEAR: 2017-
8	l ST WEEK	3	and evaluation of the Fourier coefficients.	Teaching Class	3	Yes	Guest Lecture,	1	Yes		
9	2 ND WEEK	4	Analysis of periodic wave functions- square wave, triangular wave.Longitudinal vibrations in bars.	Teaching Class	4	Yes	Study Projects		Yes		
10	3 RD WEEK		PONGAL HOLIDAYS								
11	4 TH WEEK	3	wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar	Teaching Class	3	Yes	15		40		
12	5 th WEEK	1	Transverse wave propagation along a stretched string.	Teaching Class	1				74	1.	
10N	TH: FEBR	UARY	, s			<u> </u>			, ,		/
13	I ST WEEK	4	General solution of wave equation and its significance, General solution of wave equation and its significance.	Teaching Class	4	Yes			443		
14	2 ND WEEK		II MID Examinations					_	\dashv		
5	3 RD WEEK	3	Modes of vibration of stretched string clamped at both ends, Overtones,	Teaching Class	3	Yes	Quiz	1	Yes		
6	4 TH WEEK		energy transport, transverse impedance.	Teaching Class	2	Yes			ks		
TNO	ΓH: MARC	Н									4750 000 000
7	l ST WEEK	2	Ultrasonics Ultrasonics, properties of ultrasonic	Teaching Class	2	Yes	Study Project		Yes		

18	2 ND WEEK	2	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.	Teaching Class	2	Yes	Group Discussion	Yes		
19	3 RD WEEK	1	SEMESTER END EXAMINATIONS				===			
20	4 TH WEEK		SEMESTER END EXAMINATIONS							
MON	TH: APRII							 	 \$2 <u>.</u>	
21	l ST WEEK		SEMESTER END EXAMINATIONS				.5			
22	2 ND WEEK		PRACTICAL EXAMINATIONS						 lai	
23	3 rd WEEK		PRACTICAL EXAMINATIONS							=

S. V. Cukeloni

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

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PRINCIPAL, V.S.M. COLLEGE (A) RAMACHANDRAPURAM-533 255, (E.G.DL)

CURRICULUM PLAN - 2018 - 19

Department: Physics

CLASS: III B.Sc. (MPC and MPCS) SEMISTER-VI

PAPER: Analog and Digital Electronics

			Name	of the Leet	tron . V l	AIZO	TINATE	NEXT	34.0				
	.,	BLE	Name	of the Lecti			ACTVIT			RRICUL	AD ACTI		
SERIAL	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	т –		·	HOURS	1	_	REMARKS
МО	NTH: NO	VEMI	BER								<u>.</u>		YEAR: 2018-1
1	3 RD WEEK	3	FET-Construction, Working, characteristics and uses; MOSFET-enhancement MOSFET Construction and working,		Teaching Class	3	Yes		Ward Counseli ng,		Yes		
2	4th WEEK	را	Drain characteristics of MOSFET, applications of MOSFET, Photo electric devices: Structure and operation, characteristics		Teaching Class	3					Yes		
3	5 th WEEK		Spectral response and application of LDR, LED and LCD		Teaching Class	1	Yes		Guest Lecture	1	Yes		
MON	TH: DEC	ЕМВ	ER										VEAD. 2019 1
4	1 ST WEEK	3	Operational Amplifiers: Characteristics of ideal and practical Op-Amp (IC 741), Basic differential amplifiers		Teaching Class	3	Yes				Yes		YEAR: 2018-1
5	2 ND WEEK	4	Op-Amp supply voltage, IC identification, Internal blocks of Op-Amp, its parameter off set voltages and currents, CMRR, slew rate, concept of virtual ground.		Feaching Class	4	Yes		Ward Counseli ng,		Yes		

6	3 rd WEEK		Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier		-	3			Ward Counseli ng		YES			
7	4th WEEK	3	I MID Examinations				<u>.</u>							
8	5 th WEEK	2	amplifier, difference amplifier, comparator, integrator, differentiator.		1	2	Yes				Yes			
1ON	TH: JAN	UAR'	Y										YEAR:	2018-19
9	l ST WEEK	3	Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders			3	Yes		Guest Lecture,	1	Yes			
10	2 ND WEEK	3	Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates).			3	Yes		Study Projects		Yes			
11	3 RD WEEK							_						
12	4 TH WEEK	3				3	Yes				Yes			
MON	TH: FEB	RUA	RY			-							YEAR:	2018-19
14	l st WEEK	3	Sequential digital circuits: Flip- flops, RS, Clocked SR		1	3	Yes				Yes			
15	2 ND WEEK		II MID Examinations		**									
16	3 RD WEEK	3	JK, D, T, Master-Slave, Flip- flop,			3	Yes		Quiz	1	Yes			
17	4 TH WEEK	2	Design of code converter, BCD to 7 segment			2	Yes							
	7 8 MON 9 10 11 12 MON 14	6 WEEK 7 4th WEEK 8 5 th WEEK MONTH: JAN 9 1 ST WEEK 10 2 ND WEEK 11 3 RD WEEK 12 4 TH WEEK 14 1 ST WEEK 15 2 ND WEEK 16 3 RD WEEK 17 4 TH	6 WEEK 7 4th WEEK 8 5 th WEEK 2 MONTH: JANUAR 9 1 ST WEEK 10 2 ND WEEK 11 3 RD WEEK 12 4 TH WEEK 14 1 ST WEEK 15 2 ND WEEK 16 3 RD WEEK 17 4 TH 2	as Inverting amplifier, Non-inverting amplifier 7	as Inverting amplifier, Non-inverting amplifier, Non-inverting amplifier 7	as Inverting amplifier, Non-inverting amplifier, Non-inverting amplifier 7	as Inverting amplifier, Non-inverting amplifier, Non-inverting amplifier 7	as Inverting amplifier, Non-inverting amplifier, Non-inverting amplifier 7	as Inverting amplifier, Non-inverting amplifier, Non-inverting amplifier 7	Same of the companies				

MONTH: MARCH

B D	18	I ST WEEK	2	binary/BCD to gray, gray to binary/BCD ,design of counters using state machine.		Teaching Class	2	Yes	Study Project	Yes			
	19	2 ND WEEK	2	REVESION		Teaching Class	2	Yes	Group Discussio n	Yes		·	
	20	3 RD WEEK		SEMESTER END EXAMINATIONS		Teaching Class	1	Yes		Yes			
	21	4 TH WEEK		SEMESTER END EXAMINATIONS									
I	MON	TH: APR	RIL									YI	EAR: 2018-19
	22	l ST WEEK		SEMESTER END EXAMINATIONS	·			:			_		
	23	2 ND WEEK		PRACTICAL EXAMINATIONS							·	-	
	24	3 rd WEEK		PRACTICAL EXAMINATIONS									

SIGNATURE OF THE LECTURER

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Dr. K. Srinivasa Rao

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CURRICULUM PLAN 2018 - 2019

Department: Physics

CLASS: II B.Sc. (MPC(EM) and MPCS2) SEMISTER-IV

PAPER: Thermodynamics & Radiation Physics

			Name of	the Lecturer	A.BHEEMAK	(ALA	, M.Sc						
	થ્ ટ	BLE		ADDITIONAL	CURRICU	JLAR AC	TVITY	,	CO-CURF	RICULAR	ACTIV		
SERIAL	NUMBER MONTH WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
M	ONTH: NOV	ЕМВ	ER										3 1 -
1	3 RD WEEK	4	Introduction –Deduction of Maxwell's law of distribution of molecular speeds, experimental		Teaching Class	4	Yes	22	Ward Counseling,		Yes		
2	4th WEEK	4	path - Viscosity of gases-thermal conductivity-diffusion of ,Introduction- Isothermal and adiabatic process.		Teaching Class	4					Yes		
3	5 th WEEK	2	Reversible and irreversible processes- Carnnot's engine and its efficiency		Teaching Class	1	Yes		Guest Lecture	1	Yes		
Me	ONTH: DECI	ЕМВІ	ER										The American Manager
4	l ST WEEK	3	thermodynamics. Kelvin's and Claussius statements-Entropy, physical significance –Change in entropy in reversible and irreversible processes		Teaching Class	3	Yes				Yes		
5	2 ND WEEK	4	Entropy and disorder-Entropy of Universe-Temperature-Entropy (T-S) diagram and its uses - Change of entropy of a perfect gas- change of entropy when ice changes into steam.		Teaching Class	4	Yes	:	Ward Counseling,		Yes		

6	3 rd WEEK		Thermodynamic potentials-Derivation of Maxwell's thermodynamic							
7	WEEK		relations-Clausius-Clayperon's	Teaching class		Yes	ward couns	eling	yer	
7	4th	4	ÍMID EXAMINATIONS.							
8	5 th WEEK	2	Joule Kelvin effect-expression for Joule Kelvin coefficient for perfect and vander Waal's gas.	Teaching Class	2	Yes			707	
MON	TH: JANU	ARY	<i>!</i>							. 1. 1 1.
9	I ST WEEK	3	Introduction-Joule Kelvin effect- Porous plug experiment - Joule expansion-Distinction between adiabatic and Joule Thomson expansion	Teaching Class	3	Yes	Guest Lecture,	1	Yes	
10	2 ND WEEK	4	Expression for Joule Thomson cooling-Liquefaction of helium, Kapitza's method-Adiabatic demagnetization, Production of low temperatures	Teaching Class	4	Yes	Study Projects		Yes	
11	3 RD WEEK		PONGAL HOLIDAYS						40)	
12	4 TH WEEK		Applications of substances at lowtemperature-effects of chloro and fluoro carbons on ozone layer, Blackbody-Ferry's black body-distribution of energy in the spectrum of black body	Teaching Class	3	Yes	**		403	
13	5 th WEEK	1	Wein's displacement law, Wein's law,	Teaching Class	1					
MON	TH: FEBR	UAR	Y							

		,		 			 					
14	1 ST WEEK	4	Rayleigh-Jean's law-Quantum theory of radiation-Planck's law-Measurement of radiation	Teaching Class	4	Yes			Yes			
15	2 ND WEEK		II MID Examinations					_				
16	3 RD WEEK	3	Types of pyrometers-Disappearing filament optical pyrometer-experimental determination – Angstrompyrheliometer-	Teaching Class	3	Yes	Quiz	1	Yes			
17	4 TH WEEK	2	Determination of solar constant, Temperature of Sun.	Teaching Class	2	Yes			xes		·	
MON	TH: MAR	СН								<u> </u>		,
18	l _{ST}	2	REVESION	Teaching Class	2	Yes	Study Project		Yes			
19	2 ND	2	REVESION	Teaching Class	2	Yes	Group Discussion		Yes			٦
20	3 RD WEEK		SEMESTER END EXAMINATIONS	Teaching Class	1	Yes	Digrilgian					
21	4 TH WEEK		SEMESTER END EXAMINATIONS									
MON	TH: APRII										P. F	
22	1 ST WEEK		SEMESTER END EXAMINATIONS									
23	2 ND WEEK		PRACTICAL EXAMINATIONS									1
24	3 rd WEEK		PRACTICAL EXAMINATIONS								\$	

A. Bheema Kall

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT OF Head Department of Physics

PHINOIPAURE SEMILED LA PRINCIPAL RAMACHANDRAPURAM-522 255 (A)

CURRICULUM PLAN 2018-19

Department: Physics

PAPER: V - Electricity, Magnetism and Electronics

CLASS: III B.Sc. (MPCs C1&

Name of the Lecturer: Dr. K. Srinivasa Rao, M.Sc., M.Phil., Ph.D

Γ.	ું જ	र्ल		ADDITIONAL	CURRICL	JLAR ACT			CO-CURRIO	ULAR A		3.2	
SERIAL	MONTH WEEK	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	АСТІИПУ	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE	REMARKS
MO	ONTH:	JUNE							-				
1	2 RD WEE K	2	Introduction of Static Electricity, Coulom's law		Teaching Class	2					77		**
2	3 RD WEE K	2	Electric lines of force, Electric Flux, Gauss law statement, proof		Teaching Class	2					4		·
3	4 TH WEE K	3	Gauss law applicatins E due to Uniformly charged sphere. E due to infinite conducting sheet of charge.	12	Teaching Class	2			Classroom Seminar	1	72		
MC	NTH:	JULY											
4	l ST WEE K		charged spherical shell	Electrification	Teaching Class	2			Guest Lecture	1	32		
5	2 ND WEE K		electric polarization P	Bad conducto	Teaching Class	3			Ward Counseling		2		
6	3 RD WEE K	3	Relation between D, E and P- Dielectric constant and susceptibility. Boundary conditions at the dielectric surface.	Related problems	Teaching Class	3			Book Reviews	1	Te		
7	4 TH WEE K	2	Biot-Savart's law, explanation and calculation of B due to long straight wire, a circular current loop and solenoid – Hall effect – determination of Hall coefficient	req. variatior	Teaching Class Assignment	2			»;		Z		
МО	NTH:	AUGU	ST								<u>ئو</u>	1	

8	1 ST WEE K		MID I EXAMINATIONS								
9	1 ST WEE K	2	Faraday's law-Lenz's law- Self and mutual inductance, coefficient of coupling,		Teaching Class Assignment	2 1				7.5	
10	2 ND WEE K	3	calculation of self inductance of a long solenoid, energy stored in magnetic field. Transformer - energy losses - efficiency.	Applications	Teaching Class	2		Ward Counseling	1	ريد <i>ا</i>	
11	3 RD WEE K	3	current and voltage in LR and CR circuits, vector diagrams, LCR series and parallel resonant circuit, Q -factor, power in ac circuits		Teaching Class	3			1	J.	1
12	4 TH WEE K	3	Idea of displacement current - Maxwell's equations (integral and differential forms) (no derivation), Maxwell's wave equation (with derivation).	X- ray produ	Teaching Class	3		Guest Lecture		700	
MC	NTH:	SEP1	FEMBER					· · · · · · · · ·			
13	I ST WEE K		MID II Examinations							£	
14	2ST WEE K	1	Pointing theorem (statement), production of electromagnetic waves (Hertz experiment).		Teaching Class Assignment	1			1	E	
15	3ND WEE K	3	PN junction diode, Zener diode, I-V characteristics, PNP and NPN transistors, CB, CE and CC configurations –Relation between alha, beta and gamma,		Teaching Class	1 1		QUIZ	1	2	
16	4 TH WEE K		as an amplifier.Number systems - Conversion of binary to decimal system and vice versa.		Teaching Class	2			1	3	

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17	WEE K		DASARA HOLIDAYS					1	
MO	ONTH:	ОСТ	OBER						
18	Ind WEE K	2	Binary subtraction (2's complement methods).Laws of Boolean algebra - De Morgan's laws-statement and proof,	Teaching Class	1	Study Projects	1	J.	
19	^{2nd} WEE K	2	Basic logic gates, NAND and NOR as universal gates, exclusive-OR gate, Half adder and Full adder	Teaching Class	2	Class Room Seminars	1	Že	
20	WEE		PRACTICAL EXAMINATIONS					£	
21	5 th WEE K		SEMESTER END EXAMINATIONS					Z.	
MC	NTH:	NOV	EMBER						
22	I ST WEE K		SEMESTER END EXAMINATIONS					Ex	

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

Misc., M.Phil., PtcD.
Head Department of Physics
V.S.M. College - Ramachandrapuram
est Codavari Dt. (A.P. 533.255

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
RAMACHANDRAPURAM-533 255, (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN 2018 - 19</u>

Department : Physics SEM-V

CLASS: III B.Sc.

PAPER: VI - Modern Physics

Name of the Lecturer	r: V.NAGABABU, m.sc	
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	8	LL:	Tunio of the L	ADDITIONAL		RICULAF			CO-CU	RRICUL	AR ACTI	VITY	
SERIAL	MONTH WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	АСТІИПУ	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
M	ONTH:	JUNI						5-			•	•	
	2 ND WEEk	2	Introduction of Matter waves, de Broglie's hypothesis		Teaching Class	2				:	yes		
2	3 RD WEEK	2	wavelength of matter waves, Properties of matter waves - Davisson and Germer experiment	Gammma ray scope	la.	2					405		
3	4 TH WEEK	3	Heisenberg's uncertainty principle for position and momentum (x and p) & Energy and time (E and t)Basic postulates of quantum mechanics-Schrodinger time independent - derivation		Teaching Class	2			Classroo m Seminar	1	yes		
М	ONTH:	JULY											
4	WEEK	3	Time dependent wave equations- derivation. Physical interpretation of wave function, Eigen functions, Eigen values.	Matrix properties, solutions	Teaching Class	2		20	Guest Lecture	1	yes		

		_	[A 1' CO -1 1'				,			,			
5	2 ND WEEK	2	Application of Schrodinger wave equation to particle in one dimensional infinite box.Introduction –Drawbacks of Bohr's atomic model. Vector atom		Teaching Class	3			Ward Counselin g		yes		
6	3 RD WEEK	3	Stern-Gerlach experiment - quantum numbers associated with it. L-S and j- j coupling schemes.		Teaching Class	3		8	Book Reviews	1	yes	7 3	
7	4 TH WEEK	2	MID I EXAMINATIONS										
MO	ONTH: A	AUG	UST							·			
8	I ST WEEK		Zeeman effect(Definition only) - Raman effect, hypothesis, Stokes and		Teaching Class Assignme	2					yes		
9	l ST WEEK	2	Quantum theory of Raman effect. Experimental arrangement -Applications of Raman effect	Ramann effect application s	Teaching Class	2					Yes		
10	2 ND WEEK	3	Basic ideas of nucleus -size, mass, charge density (matter energy), binding energy, magnetic moment, electric moments.	video lecture	Teaching Class	3			Ward Counselin g	1	Yes		
11	3 RD WEEK	3	Liquid drop model and Shell model (qualitative aspects only) - Magic numbers.		Teaching Class Assignme nt	2				1	yes		

12	4 TH WEEK	3	Alpha decay: basics of α-decay processes. Theory of α-decay, Gamow's theory, Geiger Nuttal law.β-decay	,	Teaching Class	3		Guest Lecture		yes		
МС	ONTH: S	SEPT	гемвек		-			•	•		<u>'</u>	
13	I ST WEEK		kinematics for β-decay, positron emission, electron capture, neutrino hypothesis.		Teaching Class Assignme nt	1			1	yes		
14	2ND WEEK	1	MID II EXAMINATIONS									
15	3RD WEEK	3	Amorphous and crystalline materials, unit cell, Miller indices,		Teaching Class	2		QUIZ	1	yes		
16	4 TH WEEK	3	reciprocal lattice, types of lattices Diffraction of X-rays by crystals,		Teaching Class	2			1	yes		
17	STH WEEK	ı	Bragg's law, experimental techniques, Laue's method	-						yes		
МО	NTH: O	СТС	DBER				 					
18	Ind WEEK	2	Introduction - experimental facts, critical temperature - critical field - Meissner effect - Isotope effect -		Teaching Class	1		Study Projects	1	yes		

19	2nd WEEK		Type I and type II superconductors - applications of superconductors.	video lecture	Teaching Class	2		Class Room Seminar s	1	Yes	
20	3RD WEEK		DASARA HOLIDAYS					Ü			
21	5 th WEEK		SEMESTER END EXAMINATIONS		77					yes	
МС	NTH: N	(OVI	EMBER								
21	I ST WEE K	3	SEM END PRACTICAL EXAMINATIONS							yes	

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SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

MSb., MPHIL Ph.D.
Inad Department of Physics
College - Ramachandrapuram
Codavan Dt (A.P. 533 255

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
RAMACHANDRAPURAM-533 255. (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN 2018- 19</u>

Department: Physics

PAPER:III - Wave Optics

CLASS: II B.Sc.(MPCS1,MPCS3,mpc(tm))

Name of the Lecturer :P.SAIBABU M.Sc.(Tech),

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			BLE			CURRI	CULAR A	ACTVITY	<u> </u>	CO-CUR	RICULA	R ACTI	/ITY	
SERIAL	ద	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONA L INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
М		TH: J	UNE											
1	- 1	2 ND WEE K	3	syllubus dictation and Introductiuon,		Teaching Class	3	yes				MOD		
2	- 1	3 RD WEE K	4	doublet. Achromatism for two lenses (i)in contact and (ii) separated by a distance.	Tr.	Teaching Class	4	yes				yer		
3	- 1	4 TH WEE K	4	aberrations, spherical aberration, methods of minimizing spherical aberration		Teaching Class	4	yes				~ ~		
4	- 1	5 th WEE K		coma, astigmatism and curvature of field, distortion		Teaching Class	3					400		
M	ONT	TH: J	ULY											
5	- 1	l ST WEE K	3	Principle of superposition – coherence- temporal coherence and spatial coherence-conditions for interference	į	Teaching Class	3					YBY		

6	2 ND WEE K	4	Fresnel's biprism-determination of wavelength of light —change of phase on reflection. Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (cosine law) —colors of thin films	Teaching Class	4		Ward Counselin g		YUY	
7	3 RD WEE K	4	Interference by a film with two non- parallel reflecting surfaces (Wedge shaped film). Determination of diameter of wire, Newton's rings in	Teaching Class	4		Book Reviews		yer	
8	4 TH WEE K	4	1MID EXAMINATION.							
9	5 th WEE K	2	Michelson interferometer, Determination of wavelength of	Teaching Class	4			,	447	
МО	NTH: A	UGU	ST							
10	l ST WEE		Introduction, distinction between Fresnel and Fraunhoffer diffraction	TEACHING CLASS	2				Yus	
11	1 ST WEE K	2	Fraunhoffer diffraction –Diffraction due to single slit	Teaching Class Assignment	2				Yes	
12	2 ND WEE K	3	Fraunhoffer diffraction due to double slit-Fraunhoffer diffraction pattern with N slits (diffraction grating)	Teaching Class	3	y.	Ward Counselin g		128	

						CARROLL TIME		0.000			
13	3 RD WEE K	3	Resolving power of grating, Determination of wavelength of light in normal incidence and minimum deviation methods using diffraction grating		Teaching Class	3		Group Discussio n	407		
14	4 TH WEE K	3	half period zones-zone plate- comparison of zone plate with convex lens-difference between interference and diffraction.		Teaching Class	3			YUS	V	
15	5 th WEE K	3	Polarized light: methods of polarization polarization by reflection, refraction, double refraction		Teaching Class Assignment	2			yer		
мо	NTH: S	EPT!	EMBER	R							
16	l ST WEE K		scattering of light-Brewster's law- Mauls law-Nicol prism polarizer and analyzer-Quarter wave plate, Half wave plate-optical activity		Teaching Class	4		Book Reviews	yer		
17	2 ND	4	MID II EXAMINATIONS								4.54.50
18	3 RD WEE K	4	Michelson interferometer, Determination of wavelength of monochromatic light using Newton's rings and Michelson Interferometer.		Teaching Class	4			Yus		

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19	4 TH WEE K	4	Lasers: introduction, spontaneous emission, stimulated emission. Population Inversion, Laser principle-Einstein coefficients-Types of lasers-He-Ne laser, Ruby laserApplications of lasers. Holography: Basic principle of holography-	Teaching Class	4				708		
20	5 th WEE K		DASARA HOLIDAYS								
MO	NTH: C	СТО	BER								
21	l ST WEE K	4	Gabor hologram and its limitations, Applications of holography Introduction- different types of fibers, rays and modes in an optical fiber, fiber material	Teaching Class	4				YeV		2 8
22	2 ND WEE K	3	principles of fiber communication (qualitative treatment only), advantages of fiber optic communication.	Teaching Class	3		Ward Counselin g		પથ્જ	:	
23	3 RD WEE K		PRACTICAL EXAMINATIONS					1			
24	4 TH WEE K		SEMESTER END EXAMINATIONS								54.7
MOI	NTH: N	OVE	MBER								
25	1 ST WEE		SEMESTER END EXAMINATIONS								

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SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

Head Department of Physics

V.S.M. College - Ramachandrapuram

East Godavan Dt. (A.P. 533 255

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
RAMACHANDRAPURAM-533 255, (E.G.Dt.)

V.S.M.COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN - 2018 - 19

Department : Physics

CLASS: I B.Sc.

PAPER: I -Mechanics and Properties of Matter

			Name of the L	ecturer : R.I	Vageswarar	ao M.Sc	:.(Tech),	B.Ed.,					
	જ	ثبغ		ADDITIONAL	CURR	CULAR A	ACTVITY		CO-CURI	RICULAI	ACTIV		
SERIAL		HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: JU	JNE											
1	3 RD WEEK	4	Scalar and vector fields. gradient of a scalar field and its physical significance. Divergence with derivations and physical interpretation.		Teaching Class	4					YFS		
2	4 TH WEEK	4	curl of a vector field Vector integration (line, surface and volume).		Teaching Class	4					7 <i>5</i> 5		
MON	TH: JU	JLY											
3	l ST WEE	3	Statement and proof of Gauss and Stokes theorems.		Teaching Class	3					λES		
4	2 ND WEE K	4	Laws of motion, motion of variable mass system, Equation of motion of a rocket. Conservation of energy and momentum.		Teaching Class	4	20 3 0		Ward Counseling		YES		
5	3 RD WEE K	4	Collisions in two and three dimensions, Concept of impact parameter, scattering cross-section,		Teaching Class Assignment	3			Book Reviews		y ES		
6	4 TH WEE K	3	I MID Examinations								ΥEZ		

MONTH: AUGUST

7	l ST WEE		Rutherford scattering- derivation.Definition of rigid body,	Teaching Class	3	Ward Counseling		YES	
8	l ST WEE K	2	Central forces. definition and examples, characteristics of central forces,		2			YES	
9	2 ND WEE K		precession of a top, Gyroscope, precession of the equinoxes. Elastic constants of isotropic solids and their relations,	Teaching Class	4	Ward Counseling		YES	
10	3 RD WEE K	2	Poisson's ratio and expression for Poisson's ratio in terms of y, n, k.	Teaching Class	2	Group Discussion	1	YES	
11	4 TH WEE K	3	Classification of beams, types of bending, point load, distributed load, shearing force and bending moment, sign conventions.	Teaching Class	3			YES	

MONTH: SEPTEMBER

12	I ST WEE	4	Central forces. definition and examples, characteristics of central forces,	Teaching Class Assignment	3 1		Study Projects		YES		
13	2 ND WEE	2	II MID Examinations			 					
14	3 RD WEE K	3	conservative nature of central forces, conservative force as a negative gradient of potential energy	Teaching Class	2		QUIZ	1	YES		
15	4 TH WEE K	3	Equation of motion under a central force. Derivation of Kepler's laws. Motion of satellites. idea of Global	Teaching Class	3	_	Seminars		X区		
16	5 th WEE		Michelson-Morley experiment. negative result.	Teaching Class	3				为到	:	

)	MON	TH: O	сто	BER								
)	17	I ST WEE K	2	Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction		Teaching Class	2				Y BJ	
)	18	2 ND WEE K	2	Addition of velocities, mass-energy relation. Concept of four-vector formalism.		Teaching Class	3		Class Room Seminars	1	YES	
	19	3 RD WEE K	3	DASARA HOLIDAYS								
	20	4 th WEE		SEMESTER END EXAMINATIONS	8						和	
	MON	TH: NO	OVE	MBER						·		
	21	I ST WEE		SEMESTER END EXAMINATIONS							グ町	
	22	2 ND WEE		PRACTICAL EXAMINATIONS							УÐ	

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao M.Sc., M.Phil., Ph.D.

Head Department of Physics

M. College - Ramachandraguram
st Godavan Dt. (A.P. 533 055 ...)

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
RAMACHANDRAPURAM-533 255. (E.G.Dt.)

V.S.M.COLLEGE: RAMACHANDRAPURAM

CURRICULAMPLAN - 2018 -2019

Department: Physics

CLASS: 1 B.Sc.

PAPER: I -Mechanics and Properties of Matter

			Name of the l	Lecturer : S.	VENKATA	LAKS	HMI	M.Sc.			·			
	વ્ય	ᄖ		ADDITIONAL	CURR	ICULAR A	ACTVITY		CO-CURI	RICULAI	R ACTIV		/0]
SERIAL NUMBER	MONTH WEEK	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS	
MON	TH: JU	JNE												
1	3 RD WEEK	4	Scalar and vector fields. gradient of a scalar field and its physical significance. Divergence with derivations and physical interpretation.		Teaching Class	4					yes			
2	4 TH WEEK	4	curl of a vector field Vector integration (line, surface and volume).		Teaching Class	4					yes			
MON	TH: JU	iLY]
3	I ST WEE	3	Statement and proof of Gauss and Stokes theorems.		Teaching Class	3					-je S			
4	2 ND WEE K	4	Laws of motion, motion of variable mass system, Equation of motion of a rocket. Conservation of energy and momentum.		Teaching Class	4			Ward Counseling		٦٤			
5	3 RD WEE K		Collisions in two and three dimensions, Concept of impact parameter, scattering cross-section,		Teaching Class Assignment	3 1			Book Reviews		yes			5
6	4 TH WEE K	3	I MID Examinations								yes			

MC	NTH: A	UG	UST									
7	1 ST WEE		Rutherford scattering- derivation.Definition of rigid body,		Teaching Class	3		Ward Counseling		Yes		
8	1 ST WEE K	2	Central forces. definition and examples, characteristics of central forces,			2				yes		
9	2 ND WEE K	4	precession of a top, Gyroscope, precession of the equinoxes. Elastic constants of isotropic solids and their relations,		Teaching Class	4		Ward Counseling		Jes		
10	3 RD WEE K	2	Poisson's ratio and expression for Poisson's ratio in terms of y, n, k.		Teaching Class	2		Group Discussion	1	Je S		
11	4 TH WEE K	3	Classification of beams, types of bending, point load, distributed load, shearing force and bending moment, sign conventions.		Teaching Class	3				70		
MO	NTH: SE	PTI	EMBER				 <u>'</u>					
12	I ST WEE	4	Central forces. definition and examples, characteristics of central forces,		Teaching Class Assignment	3		Study Projects		7es	<u> </u>	
13	2 ND WEE	2	II MID Examinations									
14	3 RD WEE K		conservative nature of central forces, conservative force as a negative gradient of potential energy		Teaching Class	2		QUIZ	1	yes		
15	4 TH WEE K	3	Equation of motion under a central force. Derivation of Kepler's laws. Motion of satellites. idea of Global	- 1	Teaching Class	3		Seminars		y _c s		
16	5 th WEE		Michelson-Morley experiment. negative result.		Teaching Class	3				૧હ		

MONTH: OCTOBER

		1 20	_									
	17	l ST WEE K		Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction	Teaching Class	2					Yes	
6	18	2 ND WEE K	2	Addition of velocities, mass-energy relation. Concept of four-vector formalism.	Teaching Class	3			Class Room Seminars	1	Yes	
ď.		3 RD										
0	19	WEE	3									
		K		DASARA HOLIDAYS								
	20	4 th WEE		SEMESTER END EXAMINATIONS							Yes	
	MON	TH: NO	VE	MBER							<u> </u>	
	21	1 ST WEE		SEMESTER END EXAMINATIONS							yes	
	22	2 ND WEE		PRACTICAL EXAMINATIONS				-			105	

S.V. Caleli

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

MSb., M.Phil., Ph.D. Head Department of Physics M. Collège - Ramachandrapuram Coddwan Dt /A.P. 5301 SIGNATURE OF THE PRINCIPAL

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PRINCIPAL, V.S.M. COLLEGE (A) RAMACHANDRAPURAM-533 255, (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN 2018 - 19

Department : Physics SEM-V

CLASS: III B.Sc.

PAPER: VI - Modern Physics

Name of the Lecturer: V.LAKSHMIDEVI, M.Sc.

	অ	ьí		ADDITIONAL	CUF	RRICULAI			CO-CUI	RRICUL	AR ACTI	VITY	
SERIAL	MONTH WEEK	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	JF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
M	ONTH:	JUNE											
1	2 ND WEEK	2	Introduction of Matter waves, de Broglie's hypothesis		Teaching Class	2							
2	3 RD WEEK	2	wavelength of matter waves, Properties of matter waves - Davisson and Germer experiment	Gammma ray scope	Teaching Class	2							
3	4 TH WEEK	3	Heisenberg's uncertainty principle for position and momentum (x and p) & Energy and time (E and t)Basic postulates of quantum mechanics-Schrodinger time independent - derivation		Teaching Class	2			Classroo m Seminar	1			
MC	NTH: J	IULY				·-							,
4	l ST WEEK		Time dependent wave equations- derivation. Physical interpretation of wave function, Eigen functions, Eigen values.	Matrix properties, solutions	Teaching Class	2			Guest Lecture	1			

5	2 ND WEEK	2	Application of Schrodinger wave equation to particle in one dimensional infinite box.Introduction –Drawbacks of Bohr's atomic model. Vector atom		Teaching Class	3		Ward Counselin g			
6	3 RD WEEK	3	Stern-Gerlach experiment - quantum numbers associated with it. L-S and j- j coupling schemes.		Teaching Class	3	:	Book Reviews	1	:	
7	4 TH WEEK	2	MID I EXAMINATIONS								
МС	ONTH: A	\UG	UST								
8	l ST WEEK		Zeeman effect(Definition only) - Raman effect, hypothesis, Stokes and		Teaching Class Assignme	2					
9	1 ST WEEK	2	Quantum theory of Raman effect.	Ramann effect application s	Teaching Class	2					
10	2 ND WEEK	3	Basic ideas of nucleus -size, mass, charge density (matter energy), binding energy, magnetic moment, electric moments.	video lecture	Teaching Class	3		Ward Counselin g	1		
11	3 RD WEEK	3	Liquid drop model and Shell model (qualitative aspects only) - Magic numbers.		Teaching Class Assignme nt	2			1		

W

1:	2 WEEK	3	Alpha decay: basics of α-decay processes. Theory of α-decay, Gamow's theory, Geiger Nuttal law.β-decay		Teaching Class	3		Guest Lecture			
M	ONTH:	SEP	ГЕМВЕК								
13	I ST WEEK		kinematics for β-decay, positron emission, electron capture, neutrino hypothesis.		Teaching Class Assignme	1			1		
14	2ND WEEK	1	MID II EXAMINATIONS								
15	3RD WEEK	3	Amorphous and crystalline materials, unit cell, Miller indices,	1	Teaching Class	2		QUIZ	1		
16	4 TH WEEK	3	reciprocal lattice, types of lattices Diffraction of X-rays by crystals,		eaching Class	2			1	2	
17	5TH WEEK		Bragg's law, experimental techniques, Laue's method								
МО	NTH: C	СТС	DBER			,	 				
18	Ind WEEK	2	Introduction - experimental facts, critical temperature - critical field - Meissner effect – Isotope effect -		eaching lass	1		Study Projects	1		

19	2nd WEEK	2	Type I and type II superconductors - applications of superconductors.	video lecture	Teaching Class	2			Class Room Seminar s	1		
20	JRD WEEK		DASARA HOLIDAYS							_		
21	5 th WEEK	57	SEMESTER END EXAMINATIONS									
мо	NTH: N	OVI	EMBER				· · ·	3		,		
21	I ST WEE K	3	SEM END PRACTICAL EXAMINATIONS	÷								

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao Maste, M.Phil., PhoD.

and Department of Physics ollège - Ramachandrapuram avan Dt. (A.P. 533,235

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A) RAMACHANDRAPURAM-533 255, (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN 2018 - 19</u>

Department: Physics

PAPER:III - Wave Optics

CLASS: II B.Sc.(MPCS2,MPC)

Name of the Lecturer : A.BHEEMAKALAM.Sc.,

		-	Name of the	ie Lecturer	:A.BHEEN	IAKA	LLAM.	Sc.,					
1		BLE			CURRI	CULAR	ACTVITY	,	CO-CUR	RICULA	R ACTIV	'ITY	
SERIAL	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONA L INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
M	ONTH: .	JUNE											
1	2 ND WEE K	3	syllubus dictation and Introductiuon,		Teaching Class	3	yes				100		
2	3 RD WEE K	4	Chromatic aberration-the achromatic doublet. Achromatism for two lenses (i)in contact and (ii) separated by a distance.		Teaching Class	4	yes				tes		
3	4 TH WEE K	4	Introduction – monochromatic aberrations, spherical aberration, methods of minimizing spherical aberration		Teaching Class	4	yes				ye		
4	5 th WEE K		coma, astigmatism and curvature of field, distortion		Teaching Class	3				,	YU		
МС	NTH: J	ULY			<u> </u>								
5	1 ST WEE K	3	Principle of superposition – coherence- temporal coherence and spatial coherence-conditions for interference of light		Teaching Class	3					AO		

96		_					 			
6	2 ND WEE K	4	Fresnel's biprism-determination of wavelength of light –change of phase on reflection. Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (cosine law) –colors of thin films		Teaching Class	4	Ward Counselin g		70	
7	3 RD WEE K	4	Interference by a film with two non- parallel reflecting surfaces (Wedge shaped film). Determination of diameter of wire, Newton's rings in		Teaching Class	4	Book Reviews		te)	
8	4 TH WEE K	4	1MID EXAMINATION.							
9	5 th WEE K	2	Michelson interferometer, Determination of wavelength of		Teaching Class	4		'n	40	
MO	NTH: A	UGU	ST				 			
10	1 ST WEE		Introduction, distinction between Fresnel and Fraunhoffer diffraction		TEACHING CLASS	2			ý.	
11	l ST WEE K		Fraunhoffer diffraction –Diffraction due to single slit	1	Teaching Class Assignment	2				
12	2 ND WEE K	- 1	Fraunhoffer diffraction due to double slit-Fraunhoffer diffraction pattern with N slits (diffraction grating)		Teaching Class	3	Ward Counselin g		yes	

13	3 RD WEE K	3	Resolving power of grating, Determination of wavelength of light in normal incidence and minimum deviation methods using diffraction grating	Teaching Class	3		Group Discussio n	7	٨	8
14	4 TH WEE K	3	Fresnel's half period zones-area of the half period zones-zone plate-comparison of zone plate with convex lens-difference between interference and diffraction.	Teaching Class	3	×		+e	8	
15	5 th WEE K		Polarized light: methods of polarization polarization by reflection, refraction, double refraction	Teaching Class Assignment	2			te	>	
MO	NTH: SI	ЕРТЕ	MBER				L			<u> </u>

16	1 ST WEE K		scattering of light-Brewster's law- Mauls law-Nicol prism polarizer and analyzer-Quarter wave plate, Half wave plate-optical activity	Teaching Class	4	Book Reviews	10	
17	2 ND	4	MID II EXAMINATIONS					 N
18	3 RD WEE K	4	Michelson interferometer, Determination of wavelength of monochromatic light using Newton's rings and Michelson Interferometer.	Teaching Class	4		te>	

19	4 TH WEE K	4	Lasers: introduction, spontaneous emission, stimulated emission. Population Inversion, Laser principle-Einstein coefficients-Types of lasers-He-Ne laser, Ruby laserApplications of lasers. Holography: Basic principle of holography-	Teaching Class	4			ted		
20	5 th WEE K		DASARA HOLIDAYS							
МО	NTH: C	сто	BER							
21	1 ST WEE K	4	Gabor hologram and its limitations, Applications of holography Introduction- different types of fibers, rays and modes in an optical fiber, fiber material	Teaching Class	4			40)		
22	2 ND WEE K	3	principles of fiber communication (qualitative treatment only), advantages of fiber optic communication.	Teaching Class	3		Ward Counselin g	te)		
1	RD								111	

MONTH: NOVEMBER

23 WEE K

24 | WEE |

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PRACTICAL EXAMINATIONS

SEMESTER END EXAMINATIONS

25	1 ST WEE K	SEMESTER END EXAMINATIONS											
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A-Bleeve Kale
SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

MSb., M.Phil., Ph.D.
Head Depadment of Physics
College - Ramachandrapuram
Codavan Dt. IA.P. 533 255

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
RAMACHANDRAPURAM-533 255, (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM CURRICULUM PLAN 2018-19

Department: Physics

PAPER: V - Electricity, Magnetism and Electronics

CLASS: III B.Sc. (MPCs C18

Name of the Lecturer: M.SRINU B.Tech

		T	Tvaine of the	e Dectuiei .	M'2KIMO R	. I ech						
	્ર	<u> </u>		ADDITIONAL	CURRIC	ULAR AC		CO-CURRI	CULAR	ACTIVIT	ГҮ	
SERIAL	MONTH WEEK	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER CONDUCTED IF NOT,	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE	REMARKS
M	ONTH	: JUNI						3	<u> </u>			
1	2 RD WEE K	2	Introduction of Static Electricity, Coulom's law		Teaching Class	2				ye?		
2	3 RD WEE K	2	Electric lines of force, Electric Flux, Gauss law statement, proof		Teaching Class	2				zes		
3	4 th WEE K	3	Gauss law applicatins E due to Uniformly charged sphere. E due to infinite conducting sheet of charge.		Teaching Class	2		Classroom Seminar	1	zes		
MO	NTH:	JULY										
4	l ST WEE K	2	charged spherical shell	Electrification	Teaching Class	2		Guest Lecture	1	ye)		
5	2 ND WEE K	3	electric polarization P	Bad conducto	Teaching Class	3		Ward Counseling		ye!		
6	3 RD WEE K	3	Relation between D, E and P- Dielectric constant and susceptibility. Boundary conditions at the dielectric surface.	Related problems	Teaching Class	3		Book Reviews	1	yes		
7	4 TH WEE K	2	Biot-Savart's law, explanation and calculation of B due to long straight wire, a circular current loop and solenoid – Hall effect – determination of Hall coefficient	req. variatior	Teaching Class Assignment	2				Jes		
МО	NTH:	AUGU	ST							yes		

8	I ST WEE K		MID I EXAMINATIONS		8						
9	1 ST WEE K	2	Faraday's law-Lenz's law- Self and mutual inductance, coefficient of coupling,		Teaching Class Assignment	2				yes	
10	2 ND WEE K	3	calculation of self inductance of a long solenoid, energy stored in magnetic field. Transformer - energy losses - efficiency.	Applications	Teaching Class	2		Ward Counseling	1	jes	
11	3 RD WEE K	3	current and voltage in LR and CR circuits, vector diagrams, LCR series and parallel resonant circuit, Q -factor, power in ac circuits		Teaching Class	3			1	zes	
12	4 TH WEE K	3	Idea of displacement current - Maxwell's equations (integral and differential forms) (no derivation), Maxwell's wave equation (with derivation).	X- ray produ	Teaching Class	3		Guest Lecture		zes	
MC	NTH:	SEPT	EMBER			-					
13	ı st WEE K		MID II Examinations						-	yes	
14	2ST WEE K	1	Pointing theorem (statement), production of electromagnetic waves (Hertz experiment).		Teaching Class Assignment	1			1	yes	;
15	3ND WEE K	3	PN junction diode, Zener diode, I-V characteristics, PNP and NPN transistors, CB, CE and CC configurations –Relation between alha, beta and gamma,		Teaching Class	1		QUIZ	1	Zes	
16	4 TH WEE K	3	as an amplifier.Number systems - Conversion of binary to decimal system and vice versa.		Teaching Class	2	•		1	yes	

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17	WEE K		DASARA HOLIDAYS					yes	
М	ONTH:	ОСТ	OBER						
18	Ind WEE K	2	Binary subtraction (2's complement methods).Laws of Boolean algebra - De Morgan's laws-statement and proof,	Teaching Class	1	Study Projects	1	yeg	
19	2nd WEE K	2	Basic logic gates, NAND and NOR as universal gates, exclusive-OR gate, Half adder and Full adder	Teaching Class	2	Class Room Seminars	1	ges	
20	WEE		PRACTICAL EXAMINATIONS				,	yes	
21	5 th WEE K_		SEMESTER END EXAMINATIONS					yes	
М	NTH:	NOV	EMBER						
22	I ST WEE K		SEMESTER END EXAMINATIONS					روي	

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao MISC., M.Phil., Phil. Head Department of Physics

V.S.M. College - Ramachandrapuram
East Godavan Dt /A.P 533 255 SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
RAMACHANDRAPURAM-533 255, (E.G.Dt.)

· F9# 8 7 2018

V. S. M. COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN 2017-18

Department: Physics

PAPER: V - Electricity, Magnetism and Electronics

CLASS: III B.Sc.

Name of the Lecturer : Dr. K. Srinivasa Rao, M.Sc., M.Phil., Ph.D

			Name of the Lectur	er : Dr. K. Sh	mvasa Rao, M.	5c., M.Phil	., PN.D						
	ઝ	ta)	× -		CURRICU	LAR ACT	VITY		CO-CURRIO	CULARA			
SERIAL	MONTII	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE	ACTIVITY	110URS ALLOTTED	WHETHER	IF NOT, ALTERNATE	REMARKS
MO	ONTH:	JUNE											
1	2 RD WEEK	2	Introduction of Static Electricity, Coulom's law	Ш	Teaching Class	2	79			2	73		
2	3 RD WEEK	2	Electric lines of force, Electric Flux, Gauss law statement, proof		Teaching Class	2	724			2	43		
3	4 TH WEEK	3	Gauss law applicatins E due to Uniformly charged sphere. E due to infinite conducting sheet of charge.		Teaching Class	2	psp		Classroom Seminar	1	73		l
MC	NTH: .	JULY											
4	I ST WEE K	2	Electrical potential – equipotential surfaces- potential due to i) a point charge, ii) charged spherical shell	Electrification	Teaching Class	2	4		Guest Lecture	1	74		
5	2 ND WEEK	3	Electric dipole moment and molecular polarizability- Electric displacement D, electric polarization P	Bad conductor	Teaching Class	3	74		Ward Counseling	2	m		
6	3 RD WEEK	3	Relation between D, E and P- Dielectric constant and susceptibility. Boundary conditions at the dielectric surface.	Related problems	Teaching Class	3	ry		Book Reviews	1	73		
7	4 TH WEEK	2	Biot-Savart's law, explanation and calculation of B due to long straight wire, a circular current loop and solenoid – Hall effect – determination of Hall coefficient and applications	Freq. variations	Teaching Class Assignment	2	res		,	2	727	:	

мо	NTH: A	UGUS	Т								
8	l ST WEE K		MID I EXAMINATIONS		·		4			44	
9	1 ST WEEK	2	Faraday's law-Lenz's law-Self and mutual inductance, coefficient of coupling,		Teaching Class Assignment	2	res		2_	43	
10	2 ND WEEK	3	calculation of self inductance of a long solenoid, energy stored in magnetic field. Transformer - energy losses - efficiency.	Applications	Teaching Class	2	Ysy	Ward Counseling	1	Yes	
11	3 RD WEEK	3	Alternating current - Relation between current and voltage in LR and CR circuits, vector diagrams, LCR series and parallel resonant circuit, Q-factor, power in ac circuits		Teaching Class	3	74		1	85	
12	4 TH WEEK	3	Idea of displacement current - Maxwell's equations (integral and differential forms) (no derivation), Maxwell's wave equation (with derivation).	37	Teaching Class	3	7-9	Guest Lecture	(vs.	
М	ONTH: S	SEPTE	MBER				_				
13	l ST WEE K		MID II Examinations								
12	2ST WEEK	1	Pointing theorem (statement), production of electromagnetic waves (Hertz experiment).		Teaching Class Assignment	1	64		1	74	
1:	3ND WEEK	3	PN junction diode, Zener diode, I-V characteristics, PNP and NPN transistors, CB, CE and CC configurations –Relation between alha, beta and gamma,	E	Teaching Class	1 1	B	QUIZ	1	Yn	

16	4 TH WEEK	3	Transistor (CE) characteristics, Transistor as an amplifier.Number systems - Conversion of binary to decimal system and vice versa.	Teaching Class	2	by		1	क	
17	STH WEEK		DASARA HOLIDAYS					_		
МО	NTH: C	СТО	BER			5*0				
18	Ind WEEK	2	Binary subtraction (2's complement methods). Laws of Boolean algebra - De Morgan's laws-statement and proof,	Teaching Class	1	79	Study Projects	1	14	
19	2nd WEEK	2	Basic logic gates, NAND and NOR as universal gates, exclusive-OR gate, Half adder and Full adder	Teaching Class	2	18	Class Room Seminars	1	44	
20	3TH WEEK	#	PRACTICAL EXAMINATIONS			Ē				
21	5 th WEEK		SEMESTER END EXAMINATIONS		4					45
МО	NTH: I	OVE	MBER	_						
22	J ST WEEK		SEMESTER END EXAMINATIONS							

SIGNATURE OF THE DEPARTMENT I/C

SIGNATURE OF THE PRINCIPAL

V. S. M. COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN 2017 - 18

Department: Physics

CLASS: III B.Sc.

PAPER: IV - Modern Physics

Name of the Lecturer: V. Naga Babu M.Sc.

					CUR	RICULAR	ACTVIT	Y	CO-CUR	RICULA			S
SERIAL	MONTII & WEEK	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: JU	NE											
1	2 RD WEEK	2	Introduction of Matter waves, de Broglie's hypothesis		Teaching Class	2				2	yes		
2	3 RD WEEK	2	wavelength of matter waves, Properties of matter waves - Davisson and Germer experiment	Gammna ray scope	Teaching Class	2			2	2_	Yes		
3	4 TH WEEK	3	Heisenberg's uncertainty principle for position and momentum (x and p) & Energy and time (E and t)Basic postulates of quantum mechanics-Schrodinger time independent -derivation		Teaching Class	2			Classroom Seminar	1	yes		
мо	NTH: JU	ILY									1		
4	I ST WEEK	3	Time dependent wave equations-derivation. Physical interpretation of wave function, Eigen functions, Eigen values.	Matrix properties, solutions	Teaching Class	2			Guest Lecture	1	1/20	20	

5	2 ND WEEI		ı F	Application of Schrodinger wave equation to particle in one dimensional infinite box.Introduction –Drawbacks of Bohr's atomic model. Vector atom model		Teaching Class	3		Ward Counselin g	2_	Tes		
6	3 RD WEE		³ ₁	Stern-Gerlach experiment - quantum : numbers associated with it. L-S and j- j coupling schemes.	2	Teaching Class	3	=	Book Reviews	1	Yes	≥	1
7	4 TH WEE		2	Zeeman effect(Definition only) -Raman effect, hypothesis, Stokes and Anti Stokes lines.		Teaching Class Assignme nt	2			(yes		
M	ONTH:	: AUG	UST										
8	l ST		85	MID I EXAMINATIONS			21					<u> </u>	
9) l ^s	- 1	2	Quantum theory of Raman effect. Experimental arrangement –Applications of Raman effect	Ramann effect applications	Teaching Class	2		0	2_	yes		
	0 2 ^N WE	ND EEK	3	Basic ideas of nucleus -size, mass, charge density (matter energy), binding energy, magnetic moment, electric moments.	video lecture	Teaching Class	3		Ward Counselin g	1	460		
		RD EEK	3	Liquid drop model and Shell model (qualitative aspects only) - Magic numbers.		Teaching Class Assignme nt	2			1	402		

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12	4 TH WEEK	3	Alpha decay: basics of α-decay processes. Theory of α-decay, Gamow's theory, Geiger Nuttal law.β-decay		Teaching Class	3		Guest Lecture	2	403		
мо	NTH: SE	PTEN	ивек	. 2	578		 					
13	l ST WEEK		MID II Examinations									
14	25T WEEK	1	kinematics for β-decay, positron emission, electron capture, neutrino hypothesis.		Teaching Class Assignme nt	1			1	405		
15	3ND WEEK	3	Amorphous and crystalline materials, unit cell, Miller indices, reciprocal lattice, types of lattices	=	Teaching Class	1 1		QUIZ	1	725		
16	4 TH WEEK	3	Diffraction of X-rays by crystals, Bragg's law, experimental techniques, Laue's method	X-ray diffraction	Teaching Class	2			1	res	1	
17	STH WEEK		DASARA HOLIDAYS									
М	NTH: O	сто	BER									
18	1nd WEEK	2	Introduction - experimental facts, critical temperature - critical field - Meissner effect - Isotope effect -		Teaching Class	1		Study Projects	1	/ <u>\$</u> \$		

19	2nd WEEK	2	Type I and type II superconductors - applications of superconductors.	video lecture	Teaching Class	2		Class Room Seminars	1	yes	79	
20	этн WEEK	714	PRACTICAL EXAMINATIONS				:					
21	5 th WEEK		SEMESTER END EXAMINATIONS									
М	MONTH: NOVEMBER				-	T -	 		<u> </u>	<u> </u>	T	
2	l l ST WEE	3	SEMESTER END EXAMINATIONS				#					

SIGNATURE OF THE DEPARTMENT I/C

SIGNATURE OF THE PRINCIPAL

V. S. M. COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN 2017 - 18

Department: Physics

PAPER: IV - Modern Physics

CLASS: III B.Sc. (M.P.C) EN

Name of the Lecturer: S.SATTIBABU M.Sc., B.Ed.,

SERIAL	শ্ব	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	CURRICULAR ACTVITY				co-cu				
	MONTII				АСПУПУ	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MONTH: JUNE							_						
1	2 RD WEEK	2	Introduction of Matter waves, de Broglie's hypothesis		Teaching Class	2				2_	148		
2	3 RD WEEK	2	wavelength of matter waves, Properties of matter waves - Davisson and Germer experiment	Gammma ray scope	Teaching Class	2			2	2_	My		
3	4 TH WEEK	3	Heisenberg's uncertainty principle for position and momentum (x and p) & Energy and time (E and t)Basic postulates of quantum mechanics-Schrodinger time independent -derivation		Teaching Class	2			Classroom Seminar	1	420		
MO	MONTH: JULY				• "								-
4	I ST WEEK		Time dependent wave equations-derivation. Physical interpretation of wave function, Eigen functions, Eigen values.	Matrix properties, solutions	Teaching Class	2			Guest Lecture	1	449		

5	2 ND WEEK	2	Application of Schrodinger wave equation to particle in one dimensional infinite box.Introduction –Drawbacks of Bohr's atomic model. Vector atom model		Teaching Class	3		Ward Counselin g	3	mg	
6	3 RD WEEK	3	Stern-Gerlach experiment - quantum numbers associated with it. L-S and j- j coupling schemes.		Teaching Class	3		Book Reviews	1	مرد	
7	4 TH WEEK	2	Zeeman effect(Definition only) -Raman effect, hypothesis, Stokes and Anti Stokes lines.		Teaching Class Assignme nt	2			2	sex	
МО	NTH: AU	JGUS	т							-	
8	l ST WEEK		MID I EXAMINATIONS		72 97230						
9	I ST WEEK	2	Quantum theory of Raman effect. Experimental arrangement –Applications of Raman effect	Ramann effect applications	Teaching Class	2			2	ren	
10	2 ND WEEK	3	Basic ideas of nucleus -size, mass, charge density (matter energy), binding energy, magnetic moment, electric moments.	video lecture	Teaching Class	3		Ward Counselin g	1	200	
11	3 RD WEEK	3	Liquid drop model and Shell model (qualitative aspects only) - Magic numbers.		Teaching Class Assignme nt	2 1			1	Sel	

12	4 TH WEEK	3	Alpha decay: basics of α-decay processes. Theory of α-decay, Gamow's theory, Geiger Nuttal law.β-decay		Teaching Class	3		Guest Lecture	3	721	
МО	NTH: SE	PTE	MBER				*				
13	l ST WEEK		MID II Examinations								
14	25T WEEK	1	kinematics for β-decay, positron emission, electron capture, neutrino hypothesis.		Teaching Class Assignme nt	1	4.		1	res	
15	3ND WEEK	3	Amorphous and crystalline materials, unit cell, Miller indices, reciprocal lattice, types of lattices		Teaching Class	1		QUIZ	1	rex	
16	4 TH WEEK	3	Diffraction of X-rays by crystals, Bragg's law, experimental techniques, Laue's method	X-ray diffraction	Teaching Class	2			1	ses	
17	STH WEEK		DASARA HOLIDAYS								
MON	NTH: OC	тов	ER							2017	
18	Ind WEEK	2	Introduction - experimental facts, critical temperature - critical field - Meissner effect - Isotope effect -		Teaching Class	1		Study Projects	1	sy	

19	2nd WEEK	2	Type I and type II superconductors - applications of superconductors.	video lecture	Teaching Class	2		Class Room Seminars	1	YES	
20	3TH WEEK		PRACTICAL EXAMINATIONS				*				02
21	5 th WEEK		SEMESTER END EXAMINATIONS								
мо	NTH: NO	OVEN	IBER					 			
21	l ST WEEK	3	SEMESTER END EXAMINATIONS		×		23				77

SIGNATURE OF THE DEPARTMENT I/C

V. S. M. COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN 2017 - 18

Department: Physics

PAPER:III - Wave Optics

CLASS: II B.Sc. (MPCS, MPCS) & II B.Sc. MPCS(S)

Name of the Lecturer : P.SAIBABU M.Sc.,

		BLE	8		CURRI	CULAR A	CTVITY		CO-CUF	RRICULA	AR ACTIV	TTY	
SERIAL	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
МО	NTH: JU	NE										4.5	
1	2 ND WEEK	3	syllubus dictation and Introductiuon,		Teaching Class	3	yes			3	yes		
2	3 RD WEEK	4	Chromatic aberration-the achromatic doublet. Achromatism for two lenses (i)in contact and (ii) separated by a distance.		Teaching Class	4	yes			4	20)		
3	4 TH WEEK	4	Introduction – monochromatic aberrations, spherical aberration, methods of minimizing spherical aberration		Teaching Class	4	yes			4	705		
4	5 th WEEK	3	coma, astigmatism and curvature of field, distortion		Teaching Class	3				3	513	0	
мо	NTH: JUI	LY				2 ×		o					
5	I ST WEEK	3	Principle of superposition – coherence- temporal coherence and spatial coherence- conditions for interference of light		Teaching Class	3				3	zes		

	2 ND VEEK	4	Fresnel's biprism-determination of wavelength of light –change of phase on reflection. Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (cosine law) –colors of thin films	Teaching Class	4			Ward Counselin g	4	TRIV
7	3 RD WEEK		Interference by a film with two non-parallel reflecting surfaces (Wedge shaped film). Determination of diameter of wire, Newton's rings in reflected light	Teaching Class	4			Book Reviews	4	crep
8	4 TH WEEK	4	Michelson interferometer, Determination of wavelength of monochromatic light using Newton's rings and Michelson Interferometer.	Teaching Class	4				4	ney
9	5 th WEEK	2	Introduction, distinction between Fresnel and Fraunhoffer diffraction	Teaching Class Assignment	2				Z	- 645
ON	TH: AU	JGUS	T	 		Т-	1	T	Τ	
10	l ST WEEK		MID I EXAMINATIONS				-	-		
11	l ST WEEK	2	Fraunhoffer diffraction –Diffraction due to single slit	Teaching Class Assignment	2		-		2_	- 545
12	2 ND WEE	3	Fraunhoffer diffraction due to double slit- Fraunhoffer diffraction pattern with N slits (diffraction grating)	Teaching Class	3			Ward Counseli g	د ام	my

13	3 RD WEEK	3	Resolving power of grating, Determination of wavelength of light in normal incidence and minimum deviation methods using diffraction grating	Teaching Class	3		Group Discussio n	3	ny	
14	4 TH WEEK	3.	Fresnel's half period zones-area of the half period zones-zone plate-comparison of zone plate with convex lens-difference between interference and diffraction.	Teaching Class	3			3	מצי	
15	5 th WEEK	3	Polarized light: methods of polarization polarization by reflection, refraction, double refraction	Teaching Class Assignment	2			3	Y.	
MOI	NTH: SE	ТЕМ	BER	\$					l	
16	l ST WEEK		MID II Examinations	10						
17	2 ND WEEK	4	scattering of light-Brewster's law-Mauls law- Nicol prism polarizer and analyzer-Quarter wave plate, Half wave plate-optical activity	Teaching Class	4		Book Reviews	4	ng	
18	3 RD WEEK	4	Determination of specific rotation by Laurent's half shade polarimeter-Babinet's compensator - idea of elliptical and circular polarization	Teaching Class	4			4	70	

19	4 TH WEEK	4	Lasers: introduction, spontaneous emission, stimulated emission. Population Inversion, Laser principle-Einstein coefficients-Types of lasers-He-Ne laser, Ruby laserApplications of lasers. Holography: Basic principle of holography-		Teaching Class	4			4	rur	
20	5 th WEEK		DASARA HOLIDAYS								
MON	NTH: OC	TOBE	R				 			1	
21	l ST WEEK	4	Gabor hologram and its limitations, Applications of holography Introduction- different types of fibers, rays and modes in an optical fiber, fiber material	. 6	Teaching Class	4	ACE:		4	ng	
22	2 ND WEEK	3	principles of fiber communication (qualitative treatment only), advantages of fiber optic communication.		Teaching Class	3		Ward Counselin g	3	75	
23	3 RD WEEK		PRACTICAL EXAMINATIONS								
24	4 TH WEEK		SEMESTER END EXAMINATIONS								

MONTH: NOVEMBER

25 I ST WEEK	SEMESTER END EXAMINATIONS							
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SIGNATURE OF THE DEPARTMENT I/C

V. S. M. COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN 2017 - 18</u>

Department: Physics

CLASS: II B.Sc.(MPCS2,MPCS3)

PAPER:III - Wave Optics

Name of the Lecturer: Ch.Satyanarayana M.Sc.,

		ta)	Name of the Le			CULAR A	CTVITY		CO-CUR	RICULA	RACTIV	TY	
SERIAL NUMBER	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	1F NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: JUI	NE											
1	2 ND WEEK	3	syllubus dictation and Introductiuon,		Teaching Class	3	yes			3	163		
2	3 RD WEEK	4	Chromatic aberration-the achromatic doublet. Achromatism for two lenses (i)in contact and (ii) separated by a distance.	3.1	Teaching Class	4	yes			4	489		
3	4 TH WEEK	4	Introduction – monochromatic aberrations, spherical aberration, methods of minimizing spherical aberration		Teaching Class	4	yes			4	463		
4	5 th WEEK	3	coma, astigmatism and curvature of field, distortion		Teaching Class	3				3	YES		
мо	NTH: JU	LY	<u> </u>				,						
5	1 ST WEEK	3	Principle of superposition – coherence- temporal coherence and spatial coherence- conditions for interference of light		Teaching Class	3				3	y ES		

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6	2 ND WEEK	4	Fresnel's biprism-determination of wavelength of light –change of phase on reflection. Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (cosine law) –colors of thin films		Teaching Class	4		Ward Counselin g	3	753		
7	3 RD WEEK	4	Interference by a film with two non-parallel reflecting surfaces (Wedge shaped film). Determination of diameter of wire, Newton's rings in reflected light		Teaching Class	4		Book Reviews	3	759	>	
8	4 TH WEEK	4	Michelson interferometer, Determination of wavelength of monochromatic light using Newton's rings and Michelson Interferometer.	-	Teaching Class	4			4	459		
9	5 th WEEK	2	Introduction, distinction between Fresnel and Fraunhoffer diffraction		Teaching Class Assignment	2			2	485	- 2.0	
MO	NTH: AU	GUST		S0					v			\neg
10	1 ST WEEK		MID I EXAMINATIONS									
11	l ST WEEK	2	Fraunhoffer diffraction –Diffraction due to single slit		Teaching Class Assignment	-2			2	489		
12	2 ND WEEK	3	Fraunhoffer diffraction due to double slit- Fraunhoffer diffraction pattern with N slits (diffraction grating)		Teaching Class	3		Ward Counselin	1	YES		

13	3 RD WEEK	3	Resolving power of grating, Determination of wavelength of light in normal incidence and minimum deviation methods using diffraction grating	Teaching Class	3		Group Discussio n	2	489	
14	4 TH WEEK	3	Fresnel's half period zones-area of the half period zones-zone plate-comparison of zone plate with convex lens-difference between interference and diffraction.	Teaching Class	3			3	५७ड	
15	5 th WEEK	3	Polarized light: methods of polarization polarization by reflection, refraction, double refraction	Teaching Class Assignment	2			2	403	
MOI	NTH: SEI	PTEM	BER		13					
16	l ST WEEK	÷	MID II Examinations						3	
17	2 ND WEEK	4	scattering of light-Brewster's law-Mauls law- Nicol prism polarizer and analyzer-Quarter wave plate, Half wave plate-optical activity	Teaching Class	4		Book Reviews	3	५६९	
18	3 RD WEEK	4	Determination of specific rotation by Laurent's half shade polarimeter-Babinet's compensator - idea of elliptical and circular polarization	Teaching Class	4			4	453	

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19	4 TH WEEK	4 S	Lasers: introduction, spontaneous emission, stimulated emission. Population Inversion, Laser principle-Einstein coefficients-Types of lasers-He-Ne laser, Ruby laserApplications of lasers. Holography: Basic principle of holography-	Teaching Class	4		-	4	4B3	
20	5 th WEEK		DASARA HOLIDAYS							
MON	TH: OC	TOBE	R							-
21	1 ST WEEK	4	Gabor hologram and its limitations, Applications of holography Introduction- different types of fibers, rays and modes in an optical fiber, fiber material	Teaching Class	4			4	458	
22	2 ND WEEK	3	principles of fiber communication (qualitative treatment only), advantages of fiber optic communication.	Teaching Class	3		Ward Counselin g	2	प्रड	
23	3 RD WEEK	ķ.	PRACTICAL EXAMINATIONS		_	1			-	
24	4 TH WEEk		SEMESTER END EXAMINATIONS			100				

MONTH: NOVEMBER

2:	l ST WEEK	SEMESTER END EXAM	INATIONS							
SIG	GNATURE OF TH	HE LECTURER	SIGNATURE	のF THE DEPA	RTMENT I/C		SI	M GNATUI	HE PRIN	ICIPAL

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V.S.M.COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN - 2017 - 18

Department : Physics

CLASS: I B.Sc.

PAPER: I -Mechanics and Properties of Matter

			Name o	f the Lecturer	:V. Naga Bal	bu M.S	c.						
		fu?		. DDITIONAL	CURR	ICULAR A		0	CO-CURE	RICULAF		TY	. ທ
SERIAL	MONTH &	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WIETHER	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: JUN	E											
1	3 RD WEEK	4	Scalar and vector fields. gradient of a scalar field and its physical significance. Divergence with derivations and physical interpretation.		Teaching Class	4			45	ų	294		45
2	4 TH WEEK	4	curl of a vector field Vector integration (line, surface and volume).		Teaching Class	4				2	pes		
MON	TH: JUL	Y											
3	l ST WEEK	3	Statement and proof of Gauss and Stokes theorems.		Teaching Class	3				1	yes		
4	2 ND WEEK	4	Laws of motion, motion of variable mass system, Equation of motion of a rocket. Conservation of energy and momentum.		Teaching Class	4			Ward Counseling	2_	Yes		
5	3 RD WEEK	4	Collisions in two and three dimensions, Concept of impact parameter, scattering cross- section,		Teaching Class Assignment	3 1			Book Reviews	l	785		

5	4 TH WEEK	2 6	Rutherford scattering- derivation.Definition of rigid body, rotational kinematic relations, equation of motion for a rotating body		Teaching Class	3		Vard inseling	2	yes	
ON	TH: AUG	UST		<u> </u>			 	·			
7	l ST WEEK	- 1	I MID Examinations								-
8,	1 ST WEEK	2	Angular momentum, Euler equations and its applications			2				Yes	
9	2 ND WEEK	4	precession of a top, Gyroscope, precession of the equinoxes.Elastic constants of isotropic solids and their relations,		Teaching Class	4		Ward ounseling	2	705	
10	3 RD WEEK	2	Poisson's ratio and expression for Poisson's ratio in terms of y, n, k.	8	Teaching Class	2		Group iscussion	1	Yes	
-11	4 TH WEEK	3	as is the of house types of hending		Teaching Class	3			2	res	
M(ONTH: SE	PTE					 				
1	ST		VI MID Everyingtions		Teaching Class Assignment	3		Study Projects	2	res	
-	3 2 ND WEE	+-	Central forces. definition and examples, characteristics of central forces,		Teaching Class	2		Ward Counseling	1	224	

14	3 RD WEEK	3	conservative nature of central forces, conservative force as a negative gradient of potential energy	Teac Clas	ching s	2	QUIZ	1	res		
15	4 TH WEEK	3	Equation of motion under a central force. Derivation of Kepler's laws. Motion of satellites. idea of Global Positioning System	Teac Class	ching s	3	Seminars	2	yes	27	
16	5 th WEEK		DASARA HOLIDAYS								
MON	TH: OC1	COBI	ER								
17	i st WEEK	2	Galilean relativity. absolute frames. Michelson-Morley experiment. negative result.	Teac Class	thing s	2		ı	yes		
18	2 ND WEEK	2	Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction	Teac Class		3	Class Room Seminars	1	res	11	
19	3 RD WEEK	3	Addition of velocities, mass-energy relation. Concept of four-vector formalism.	Teac Class		3		2	785		
20	4 th WEEK		SEMESTER END EXAMINATIONS								
MON	TH: NOV	'EMI	BER								
21	l ST WEEK		SEMESTER END EXAMINATIONS								
22	2 ND WEEK		PRACTICAL EXAMINATIONS							\	

SIGNATURE OF THE DEPARTMENT I/C

V.S.M.COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN - 2017 - 18</u>

CLASS: I B.Sc.

PAPER: 1 -Mechanics and Properties of Matter

	Depart	ment	:Physics	CLASS			A B Ed						
			Name of the	Lecturer : R.N	ageswararao N CURRIC	ULAR AC	TVITY		CO-CURRIC	ULARA	CTIVIT	Υ	SX.
SERIAL NUNIBER	MONTII & WEEK	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION		HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	NOURS	WHETHER	IF NOT, ALTERNATE. DATE	REMARKS
MON	TH: JU	NE					_						
1	3 RD WEEK	4	Scalar and vector fields, gradient of a scala field and its physical significance. Divergence		Teaching Class	4				4	Yes	::	
1	Ž.		with derivations and physical interpretation. curl of a vector field Vector integratio		Teaching	4	5'6'			4	1/01		
2	4 TH WEE	4	(line, surface and volume).		Class		-						
мо	NTH: J	JLY	1 Chalcon		Teaching		-			3	40		
3	1 ST	1 3	Statement and proof of Gauss and Stokes theorems.		Class	3	-			-	 	-	+-
3	WEE 2 ^{NE}	K 4	Laws of motion, motion of variable massystem, Equation of motion of a rocket. Conservation of energy and momentum.	S	Teaching Class	4			Ward Counseling	4	Ye	3	
"	WE	K			Teaching	3	+-	-	Book	3	He	3	
	3 ^R WE	1 6	Collisions in two and three dimensions, Concept of impact parameter, scattering ero section,	ss-	Class Assignmen	1 1			Reviews				

									_	l 1	- 1
6	4 TH WEEK	3	Rutherford scattering- derivation. Definition of rigid body, rotational kinematic relations, equation of motion for a rotating body		Teaching Class	3		Ward Counseling	3	Jes	
MON	TH: AUC	UST					 -			**	_
7	1 ST WEEK		I MID Examinations								
8	I ST WEEK	2	Angular momentum, Euler equations and its applications		×	2	 		2	V el	
9	2 ND WEEK	4	precession of a top, Gyroscope, precession of the equinoxes. Elastic constants of isotropic solids and their relations,	=	Teaching Class	. 4	<u> </u>	Ward Counseling	4	1 es	
10	3 RD . WEEK	2	Poisson's ratio and expression for Poisson's ratio in terms of y, n, k.		Teaching Class	2		Group Discussion	1	Yes	£9
11	4 TH WEEK	3	Classification of beams, types of bending, point load, distributed load, shearing force and bending moment, sign conventions.		Teaching Class	3					
МО	NTH: SE	PTE	MBER				 				
12	l ST WEEk	4	II MID Examinations		Teaching Class Assignment	3		Study Projects	3	408	
13	2 ND WEEF	2	Central forces. definition and examples, characteristics of central forces,		Teaching Class	2		Ward Counseling	1	rel	

		_							
14	3 RD WEEK	3	conservative nature of central forces, conservative force as a negative gradient of potential energy	Teaching Class	2	QUIZ	1	14	
15	4 TH WEEK	3	Equation of motion under a central force. Derivation of Kepler's laws. Motion of satellites. idea of Global Positioning System	Teaching Class	3	Seminars	3	/es	
16	5 th WEEK		DASARA HOLIDAYS						
MOI	NTH: OCT	гові	ER	7			1		
17	I ST WEEK	2	Galilean relativity. absolute frames. Michelson-Morley experiment. negative result.	Teaching Class	2		2	Yes	
18	2 ND WEEK	2	Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction	Teaching Class	3	Class Room Seminars	1	/el	
19	3 RD WEEK	3	Addition of velocities, mass-energy relation. Concept of four-vector formalism.	Teaching Class	3		3	Yel	
20	4 th WEEK		SEMESTER END EXAMINATIONS						
MON	TH: NOV	ЕМВ	BER			<u> </u>			-+
21	I ST WEEK		SEMESTER END EXAMINATIONS						
22	2 ND WEEK		PRACTICAL EXAMINATIONS						

R Page Signature of the Lecturer

SIGNATURE OF THE DEPARTMENT I/C

$\underline{V.S.M.COLLEGE:RAMACHANDRAPURAM}$

Department : Physics

CURRICULUM PLAN - 2017 - 18
CLASS: III B.Sc. (MPC and MPCS) SEMISTER-VI

PAPER: Analog and Digital Electronics

			Name of the L	ecturer : D	r. K. Srin	ivasa	Rao,	M.Sc.,	M.Phil.,	Ph.D			
	26	BLE		ADDITIONAL	CURI	RICULAR	ACTVIT	Y	co-cui	RRICULA	R ACTIV	/ITY	
SERIAL	MONTSI &	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MON	тн: по	VEME	BER		П								YEAR: 2017-18
ı	3 RD WEEK	3	FET-Construction, Working, characteristics and uses; MOSFET-enhancement MOSFET Construction and working,		Teaching Class	3	Yes	You	Ward Counseli ng,	3	Yes		
2	4th WEEK	3	Drain characteristics of MOSFET, applications of MOSFET, Photo electric devices: Structure and operation, characteristics		Teaching Class	3							
3	5 th WEEK	2	Spectral response and application of LDR, LED and LCD		Teaching Class	1 1	Yes		Guest Lecture	1	Yes		
MON	TH: DEC	семв	ER										YEAR: 2017-18
4	t st WEEK		Operational Amplifiers: Characteristics of ideal and practical Op-Amp (IC 741), Basic differential amplifiers		Teaching Class	3	Yes						
5	2 ND WEEK	4	Op-Amp supply voltage, IC identification, Internal blocks of Op-Amp, its parameter off set voltages and currents, CMRR, slew rate, concept of virtual ground.		Teaching Class	4	Yes		Ward Counseli ng,	4	Yes		

3 rd WEEK		I MID Examinations										
4th WEEK	3	as Inverting amplifier, Non-inverting		Teaching Class	3	Yes		Ward Counseli ng	3	Yes		
5 th WEEK	2	comparator, integrator,		Teaching Class	2	Yes						YEAR: 2017-18
NTH: JAN	UAR	Υ										YEAR: 2017-16
l ST WEEK		Data processing circuits: Multiplexers, De-multiplexers,		Teaching Class	3	Yes		Guest Lecture,	1	Yes		
2 ND WEEK	.3	Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates).	0:	Teaching Class	3	Yes		Study Projects	2	Yes		
3 RD WEEK		PONGAL HOLIDAYS							-			
4 TH WEEK	3	IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator.		Teaching Class	3	Yes						
NTH: FE	BRUA	RY										YEAR: 2017-18
1 ST	3	Sequential digital circuits: Flip- flops, RS, Clocked SR		Teaching Class	3	Yes						
2 ND WEEK		II MID Examinations							_			
3 RD WEEK	3	JK, D, T, Master-Slave, Flip- flop,		Teachin- Class	3	Yes	_	Quiz	1	Yes		
4 TH WEEK	2	Design of code converter, BCD to 7 segment		Teachin Class	g 2	Yes						
	WEEK 4th WEEK 5th WEEK NTH: JAN 1ST WEEK 2ND WEEK 4TH WEEK 2NTH: FE 1ST WEEK 2ND WEEK 4TH WEEK 4TH WEEK 4TH WEEK 4TH WEEK	WEEK 4th WEEK 5th WEEK 2 NTH: JANUARY 1ST WEEK 3 2ND WEEK 4TH WEEK 4TH WEEK 3 2NTH: FEBRUA 1ST WEEK 4TH WEEK 3 3 4TH WEEK 3 4TH WEEK 3 4TH WEEK 3	WEEK 4th WEEK 3 Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier 5th WEEK 2 mplifier, difference amplifier, comparator, integrator, differentiator. NTH: JANUARY 1ST WEEK 3 Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders 2ND WEEK 3 Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates). PONGAL HOLIDAYS IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator. NTH: FEBRUARY 1ST WEEK 3 Sequential digital circuits: Flipflops, RS, Clocked SR II MID Examinations 3 RD WEEK 3 JK, D, T, Master-Slave, Flip-flop, Design of code converter, BCD to 7	WEEK 4th WEEK 3 Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier 5th WEEK 2 amplifier, difference amplifier, comparator, integrator, differentiator. VTH: JANUARY 1ST WEEK 3 Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders 2ND WEEK 3 Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates). PONGAL HOLIDAYS 4TH WEEK 3 IC 555 Timer -lts pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator. NTH: FEBRUARY 1ST WEEK 3 Sequential digital circuits: Flip- flops, RS, Clocked SR 1 MID Examinations 1 MID Examinations 3 JK, D, T, Master-Slave, Flip- flop, 4 TH Design of code converter, BCD to 7	WEEK 4th WEEK 3 Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier 5th WEEK 2 amplifier, difference amplifier, comparator, integrator, differentiator. WITH: JANUARY 1ST WEEK 3 Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders 2ND WEEK 3 Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates). 3RD PONGAL HOLIDAYS WEEK 4TH WEEK 3 IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator. NTH: FEBRUARY 1ST WEEK 3 Sequential digital circuits: Flip-flops, RS, Clocked SR 1MID Examinations Teaching Class Teaching Class	WEEK 4th WEEK 3 Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier 5th WEEK 2 amplifier, difference amplifier, comparator, integrator, differentiator. YTH: JANUARY 1ST WEEK 3 Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders 2ND WEEK 3 Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates). 3RD PONGAL HOLIDAYS IC 555 Timer -Its pin diagram, internal architecture, Application as astable multi vibrator. NTH: FEBRUARY 1ST WEEK 3 Sequential digital circuits: Flip-flops, RS, Clocked SR 1 MID Examinations Teaching Class 3 Teaching Class 4 TH Design of code converter, BCD to 7 Teaching Class	WEEK 4th WEEK 4th WEEK 3 Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier 5th WEEK 2 amplifier, difference amplifier, Comparator, integrator, differentiator. VTH: JANUARY 1ST WEEK 3 Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders 2ND WEEK 3 Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates). 3RD WEEK 4TH WEEK 4TH WEEK 3 IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator. NTH: FEBRUARY 1ST WEEK 3 Sequential digital circuits: Flip-flops, RS, Clocked SR 1 MID Examinations 1 Teaching Class 3 Yes Teaching Class 3 Yes	WEEK Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier amplifier, Week 2 amplifier, difference amplifier, Comparator, integrator, differentiator. TH: JANUARY 1ST WEEK 3 Data processing circuits: Multiplexers, encoders, decoders 2ND WEEK 4 Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates). 3RD WEEK 4 PONGAL HOLIDAYS WEEK 3 IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator. NTH: FEBRUARY 1ST WEEK 3 Sequential digital circuits: Flip-flops, RS, Clocked SR 1 MID Examinations Teaching Class 3 Yes Teaching Class 3 Yes	WEEK 4th WEEK 4th WEEK 3 Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier 5th WEEK 2 comparator, integrator, difference amplifier, Comparator, integrator, differentiator. WH: JANUARY 1st WEEK 3 Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders 2 ND WEEK 4 Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates). 3 RD WEEK 4 PONGAL HOLIDAYS WEEK 4 TH WEEK 3 Sequential digital circuits: Plip-flops, RS, Clocked SR 1st WEEK 3 Sequential digital circuits: Flip-flops, RS, Clocked SR 1th MID Examinations 1th Mid	WEEK Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier and Internal architecture, Application as astable multi vibrator. WEEK Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier, difference amplifier, comparator, integrator, differentiator. TH: JANUARY Str. Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders Veek Multiplexers, De-multiplexers, encoders, decoders Class Week Week Class Week Characteristics for Digital ICs - RTL, DTL, TTL (NAND & NOR Gates). ATII Week Week Class Week ATII Week Week Sequential digital circuits: Flipflops, RS, Clocked SR Class Week Week	WEEK 4th WEEK 4th WEEK 3 Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier 5th WEEK 5th WEEK 2 comparator, integrator, difference amplifier, Comparator, integrator, differentiator. NTH: JANUARY 1st WEEK 3 Data processing circuits: WEEK 3 Multiplexers, De-multiplexers, encoders, decoders 2 ND Data processing circuits: WEEK 3 Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates). 3 RD WEEK 4 TH WEEK 3 IC 555 Timer - Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator. NTH: FEBRUARY 1 ST WEEK 3 Sequential digital circuits: Flipflops, RS, Clocked SR 4 IM MID Examinations 1 Teaching Class 3 Yes Guest Lecture, 1 Yes Guest Lecture, 1 Yes Guest Class 3 Yes Guest Class 3 Yes Guest Lecture, 1 Yes Guest Lecture, 1 Yes Guest Lecture, 1 Yes Teaching Class 3 Yes Study Projects Yes Class 3 Yes Guest Lecture, 1 Yes Teaching Class 3 Yes Quiz 1 Yes Teaching Class 3 Yes Quiz 1 Yes Teaching Class 3 Yes Quiz 1 Yes Teaching Class 4 TH MID Examinations Teaching Class 3 Yes Quiz 1 Yes Teaching Class 4 TH MID Examinations Teaching Class 3 Yes Quiz 1 Yes Teaching Class 4 TH MID Examinations Teaching Class 4 TH MID Examinations Teaching Class 3 Yes Quiz 1 Yes Teaching Class 4 TH MID Examinations	WEEK 4th WEEK 3 Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier, difference amplifier, Comparator, integrator, differentiator. **TH: JANUARY** 1ST WEEK 3 Data processing circuits: Multiplexers, encoders, decoders 1 Yes 1 Yes

18	I ST WEEK	2	binary/BCD to gray, gray to binary/BCD ,design of counters using state machine.	Tea Clas	ching ss	2	Yes		Study Project	Yes			
19	2 ND WEEK	2	REVESION	Tead Clas	ching s	2	Yes		Group Discussio n	Yes			
20	3 RD WEEK		SEMESTER END EXAMINATIONS	Tead Clas	ching s	1	¥\$8-						
21	4 TH WEEK		SEMESTER END EXAMINATIONS										
MON	TH: APR	RIL										YEA	R: 2017-18
22	1 ST WEEK		SEMESTER END EXAMINATIONS										
23	2 ND WEEK		PRACTICAL EXAMINATIONS					,					
24	3 rd WEEK		PRACTICAL EXAMINATIONS										

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SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

V.S.M.COLLEGE: RAMACHANDRAPURAM

Department : Physics

CURRICULUM PLAN - 2017 - 18
CLASS: III B.Sc. (MPC and MPCS) SEMISTER-VI

PAPER: Analog and Digital Electronics

			Name	of the Lecti	ıre	r : S.S.	ATTII	BABU	M.Sc	, B.Ed,				
		BLE					ICULAR			1	RRICULA	R ACTIV	/ITY	×
SERIAL	MONTII & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION		ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: NO	VEMI	BER											YEAR: 2017-18
1	3 RD WEEK	3	FET-Construction, Working, characteristics and uses; MOSFET-enhancement MOSFET Construction and working,		Te: Cla	aching ass	3	Yes	:	Ward Counseli ng,		Yes		
2	4th WEEK	3	Drain characteristics of MOSFET, applications of MOSFET, Photo electric devices: Structure and operation, characteristics		Te: Cla	aching ass	3							-
3	5 th WEEK	2	Spectral response and application of LDR, LED and LCD		Tea Cla	aching Iss	1 1	Yes		Guest Lecture	1	Yes		
MON	TH: DEC	EME	EER =					10						YEAR: 2017-18
4	l ST WEEK		Operational Amplifiers: Characteristics of ideal and practical Op-Amp (IC 741), Basic differential amplifiers		Tea Cla	aching Iss	3	Yes						
5	2 ND WEEK		Op-Amp supply voltage, IC identification, Internal blocks of Op-Amp, its parameter off set voltages and currents, CMRR, slew rate, concept of virtual ground.		Tea Cla	aching Iss	4	Yes		Ward Counseli ng,		Yes		

6	3 rd WEEK		I MID Examinations								
7	4th WEEK	3	Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier	Teaching Class	3	Yes	Ward Counseli ng	:	Yes		
8	5 th WEEK	2	amplifier, difference amplifier, comparator, integrator, differentiator.	Teaching Class	2	Yes		<u> </u>	X		
MON	TH: JAN	UAR	Y				 				YEAR: 2017-18
9	I ST WEEK	3	Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders	Teaching Class	3	Yes	Guest Lecture,	1	Yes	:1	
10	2 ND WEEK	3	Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates).	Teaching Class	3	Yes	Study Projects	22	Yes		· ·
11	3 RD WEEK		PONGAL HOLIDAYS								
12	4 TH WEEK	3	IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator.	Teaching Class	3	Yes					
MO	NTH: FEI	BRUA	RY								YEAR: 2017-18
14	l ST WEEK	3	Sequential digital circuits: Flip- flops, RS, Clocked SR	Teaching Class	3	Yes					
15	2 ND WEEK		II MID Examinations								
16	3 RD WEEK	3	JK, D, T, Master-Slave, Flip- flop,	Teachin Class	3	Yes	Quiz	1	Yes		
17	4 TH WEEK	2	Design of code converter, BCD to 7 segment	Teachin Class	2	Yes					

18	l ST WEEK	2	binary/BCD to gray, gray to binary/BCD ,design of counters using state machine.	Teachi Class	ng 2	Yes	Study Project	Yes	 	 	
19	2 ND WEEK	2	REVESION	Teachi Class	ng 2	Yes	Group Discussio n	Yes			
20	3 RD WEEK		SEMESTER END EXAMINATIONS	Teachi Class	ng 1	Yes				 	
21	4 TH WEEK		SEMESTER END EXAMINATIONS							 	
MON	NTH: APR	RIL						 		 YEAR	R: 2017-18
22	1 ST WEEK		SEMESTER END EXAMINATIONS							 	
23	2 ND WEEK		PRACTICAL EXAMINATIONS							 	
24	3 rd WEEK		PRACTICAL EXAMINATIONS			<u> </u>	 * 1			 	

SIGNATURE OF THE DEPARTMENT I/C

V.S.M.COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN - 2017 - 18</u>

Department : Physics

CLASS: III B.Sc. (MPC and MPCS) SEMISTER-VI

PAPER: Analog and Digital Electronics

			Name	of the Lectu	ıre	r : S.S.	ATTI	BABU	M.Sc	, B.Ed,				
		ILE					IICULAR			CO-CUR	RICULA	R ACTIV		S
SERIAL	MONTII & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION		АСТІУІТУ	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	YEAR: 2017-18
MON	TH: NOV	ЕМВ	ER											YEAK: 2017-18
1	3 RD WEEK		FET-Construction, Working, characteristics and uses; MOSFET-enhancement MOSFET Construction and working,			aching ass	3	Yes		Ward Counseli ng,		Yes		
2	4th WEEK	3	Drain characteristics of MOSFET, applications of MOSFET, Photo electric devices: Structure and operation, characteristics			aching ass	3							
3	5 th WEEK	2	Spectral response and application of LDR, LED and LCD			aching ass	1	Yes		Guest Lecture	1	Yes		
MON	TH: DEC	ЕМВ	BER											YEAR: 2017-18
4	l ST WEEK	3	Operational Amplifiers: Characteristics of ideal and practical Op-Amp (IC 741), Basic differential amplifiers			aching ass	3	Yes						
5	2 ND WEEK	4	Op-Amp supply voltage, IC identification, Internal blocks of Op-Amp, its parameter off set voltages and currents, CMRR, slew rate, concept of virtual ground.			eaching ass	4	Yes		Ward Counseli ng,		Yes		_3

6	3 rd WEEK		I MID Examinations			· · · · · · · · · · · · · · · · · · ·					0 A) 1 A		
7	4th WEEK	3	Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier		Teaching Class	3	Yes		Ward Counseli ng		Yes		
8	5 th WEEK	2	amplifier, difference amplifier, comparator, integrator, differentiator.		Teaching Class	2	Yes						
MON	TH: JAN	UAR	Y	·				-					 YEAR: 2017-18
9	l ST WEEK	3	Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders		Teaching Class	3	Yes		Guest Lecture,	1	Yes		
10	2 ND WEEK	3	Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates).		Teaching Class	3	Yes		Study Projects		Yes	V	
11	3 RD WEEK		PONGAL HOLIDAYS										
12	4 TH WEEK	3	IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator.		Teaching Class	3	Yes						
MON	TH: FEB	RUA	RY										YEAR: 2017-18
14	I ST WEEK	3	Sequential digital circuits: Flip-flops, RS, Clocked SR		Teaching Class	3	Yes						
15	2 ND WEEK		II MID Examinations		٨								
16	3 RD WEEK	3	JK, D, T, Master-Slave, Flip- flop,		Teaching Class	3	Yes		Quiz	1	Yes		
17	4 TH WEEK	2	Design of code converter, BCD to 7 segment		Teaching Class	2	Yes						

_														
18	l ST WEEK		binary/BCD to gray, gray to binary/BCD ,design of counters using state machine.		Teaching Class	2	Yes	Study Project		Yes	 	·		
19	2 ND WEEK	2	REVESION		Teaching Class	2	Yes	Group Discussio n		Yes				
20	3 RD WEEK		SEMESTER END EXAMINATIONS		Teaching Class	1	Yes							
21	4 TH WEEK		SEMESTER END EXAMINATIONS						_		 			
МО	NTH: API	RIL		,	.						 		YEAR	R: 2017-18
22	l ST WEEK		SEMESTER END EXAMINATIONS		 • .									
23	2 ND WEEK		PRACTICAL EXAMINATIONS								 			
24	3 rd WEEK		PRACTICAL EXAMINATIONS											

SSQ HI L SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

V.S.M.COLLEGE: RAMACHANDRAPURAM CURRICULUM PLAN - 2017 - 18 CLASS: III B.Sc. (MPC and MPCS) SEMISTER-VI PAPER: A

Department: Physics

PAPER: Analog and Digital Electronics

			Name of the L	ecturer : D	r. K. Srin	ivasa	Rao, I	M.Sc.,	M.Phil.,	Ph.D			
	2 8	BLE		ADDITIONAL	CURI	RICULAR	ACTVIT	Y	co-cui	RRICULA	R ACTIV	ITY	-
SERIAL	MONTII 8 WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: NO	/EME	BER										YEAR: 2017-18
1	3 RD WEEK	3	FET-Construction, Working, characteristics and uses; MOSFET-enhancement MOSFET Construction and working,		Teaching Class	3	Yes		Ward Counseli ng,		Yes		
2	4th WEEK	3	Drain characteristics of MOSFET, applications of MOSFET, Photo electric devices: Structure and operation, characteristics	:3	Teaching Class	3					-		
3	5 th WEEK	2	Spectral response and application of LDR, LED and LCD		Teaching Class	1 1	Yes		Guest Lecture	1	Yes		
MON	TH: DEC	ЕМВ	ER								_		YEAR: 2017-18
4	I ST WEEK	3	Operational Amplifiers: Characteristics of ideal and practical Op-Amp (IC 741), Basic differential amplifiers		Teaching Class	3	Yes						
5	2 ND WEEK		Op-Amp supply voltage, IC identification, Internal blocks of Op-Amp, its parameter off set voltages and currents, CMRR, slew rate, concept of virtual ground.		Teaching Class	4	Yes		Ward Counseli ng,	33	Yes		

									-		
6	3 rd WEEK		I MID Examinations								
7	4th WEEK		Applications of Op-Amp: Op-Amp as Inverting amplifier, Non-inverting amplifier	Teaching Class	3	Yes	 Ward Counseli ng		Yes		
8	5 th WEEK		amplifier, difference amplifier, comparator, integrator, differentiator.	 Teaching Class	2	Yes					YEAR: 2017-18
MON	NTH: JAN	UAR	Y				 				YEAR: 2017-18
9	I ST WEEK	3	Data processing circuits: Multiplexers, De-multiplexers, encoders, decoders	Teaching Class	3	Yes	Guest Lecture,	1	Yes		
10	2 ND WEEK	3	Characteristics for Digital ICs -RTL, DTL, TTL (NAND & NOR Gates).	 Teaching Class	3	Yes	Study Projects		Yes	G.	
11	3 RD WEEK		PONGAL HOLIDAYS				 				
12	4 TH WEEK	3	IC 555 Timer -Its pin diagram, internal architecture, Application as astablemulti vibrator and mono stable multi vibrator.	Teaching Class	3	Yes					
MO	NTH: FE	BRUA		 							YEAR: 2017-18
14	ıst	3	Sequential digital circuits: Flip- flops, RS, Clocked SR	Teaching Class	3	Yes					
15	2 ND WEEK		II MID Examinations								
16	3 RD WEEK	3	JK, D, T, Master-Slave, Flip- flop,	Teaching Class	3	Yes	Quiz	1	Yes		
17	4 TH WEEK	2	Design of code converter, BCD to 7 segment	 Teaching Class	2	Yes					

(6)

18	l ST WEEK	2	binary/BCD to gray, gray to binary/BCD ,design of counters using state machine.	Teaching Class	2	Yes	P	Study Project	Y	es		 	<u></u>	·
19	2 ND WEEK	2	REVESION	Teaching Class	2	Yes		Group scussio n	Y	es		 		
20	3 RD WEEK		SEMESTER END EXAMINATIONS	Teaching Class	1	Yes						 		:
21	4 TH WEEK		SEMESTER END EXAMINATIONS									 		
MON	NTH: APF	RIL										 	YEAR: 2	017-18
22	l ST WEEK		SEMESTER END EXAMINATIONS									 		
23	2 ND WEEK		PRACTICAL EXAMINATIONS									 		0
24	3 rd WEEK		PRACTICAL EXAMINATIONS								_	 		

SIGNATURE OF THE DEPARTMENT I/C

<u>V.S.M.COLLEGE</u>: RAMACHANDRAPURAM

CURRICULUM PLAN - 2017 - 18

Department: Physics

CLASS: II B.Sc. (MPC and MPCS) SEMISTER-IV

PAPER: Thermodynamics & Radiation Physics

		1.	Name of the	Lecturer : CH	SATYANAR	AYAN	IA, M.	Sc.					
AL.	8	I AB	d'	ADDITIONAL	CURRIC	ULAR AC	CTVITY			RICULA	R ACTIV	ITY	
SERIAL	Σ	HOURS AVAILABLE	<u> </u>	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	АСТІИТУ	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
VIOI	NTH: NOV	EMI								-			VEAD- 2017
1	3 RD WEEK	4	Introduction –Deduction of Maxwell's law of distribution of molecular speeds, experimental verification		Teaching Class	4	Yes		Ward Counseling,	(Se 7	Yes		YEAR: 2017-
2	4th WEEK	4	path - Viscosity of gases-thermal conductivity-diffusion of ,Introduction- Isothermal and adiabatic process.	5	Teaching Class	4	YES						
3	5 th WEEK	2	Reversible and irreversible processes- Carnnot's engine and its efficiency		Teaching Class	1	Yes		Guest Lecture	1	Yes		
ON.	TH: DECE	MBI	CR										7/17/17
4	l st WEEK		thermodynamics. Kelvin's and Claussius statements-Entropy, physical significance –Change in entropy in reversible and irreversible processes		Teaching Class	3	Yes						YEAR: 2017-1
	2 ND WEEK	4	Entropy and disorder-Entropy of Universe-Temperature-Entropy (T-S) diagram and its uses - Change of entropy of a perfect gas- change of entropy when ice changes into steam.	1	eaching Class	4	Yes	C	Ward ounseling,	1	Yes		

6	3 rd WEEK		I MID Examinations								
7	4th WEEK	4	Thermodynamic potentials- Derivation of Maxwell's thermodynamic relations-Clausius- Clayperon's equation-Derivation for ratio of specific heats-Derivation for difference of two specific heats for perfect gas.		Teaching Class	4	Yes	Ward Counseling		Yes	
8	5 th WEEK	2	Joule Kelvin effect-expression for Joule Kelvin coefficient for perfect and vander Waal's gas.		Teaching Class	2	Yes		2.		
MON	TH: JANU	ARY	1								YEAR: 2017-18
9	l ST WEEK	3	Introduction-Joule Kelvin effect- Porous plug experiment - Joule expansion-Distinction between adiabatic and Joule Thomson expansion	<i>8</i> =	Teaching Class	3	Yes	Guest Lecture,	1	Yes	
10	2 ND WEEK	4	Expression for Joule Thomson cooling-Liquefaction of helium, Kapitza's method-Adiabatic demagnetization, Production of low temperatures		Teaching Class	4	Yes	Study Projects	(S)	Yes	
11	3 RD WEEK		PONGAL HOLIDAYS				3				۵
12	4 TH WEEK	3	Applications of substances at lowtemperature-effects of chloro and fluoro carbons on ozone layer, Blackbody-Ferry's black body-Histribution of energy in the spectrum of black body		Teaching Class	3	Yes				

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								1	1		
13	5 th WEEK	1	Wein's displacement law, Wein's law,	Teaching Class	1	463					
MON	TH: FEBR	UAR	RY								YEAR: 2017-18
14	l st WEEK	4	Rayleigh-Jean's law-Quantum theory of radiation-Planck's law-Measurement of radiation	Teaching Class	4	Yes					ж ->
15	2 ND WEEK	1	II MID Examinations		_			1.7		(9)	
16	3 RD WEEK	3	Types of pyrometers-Disappearing filament optical pyrometer-experimental determination – Angstrompyrheliometer-	Teaching Class	3	Yes	Quiz	1	Yes		
17	4 TH WEEK	2	Determination of solar constant, Temperature of Sun.	Teaching Class	2	Yes					
MON	TH: MAR	СН									YEAR: 2017-18
18	l ST WEEK	2	REVESION	Teaching Class	2	Yes	Study Project]	Yes		<u>.</u>
19	2 ND WEEK	2	REVESION	Teaching Class	2	Yes	Group Discussion	ļ	Yes		
20	3 RD WEEK		SEMESTER END EXAMINATIONS	Teaching Class	1	Yes					
21	4 TH WEEK		SEMESTER END EXAMINATIONS								
MON	TH: APRII	 L	×								YEAR: 2017-18
22	l ST WEEK		SEMESTER END EXAMINATIONS								

23	2 ND WEEK	PRACTICAL EXAMINATIONS	men					
24	3 rd WEEK	PRACTICAL EXAMINATIONS						

SIGNATURE OF THE DEPARTMENT I/C

V.S.M.COLLEGE: RAMACHANDRAPURAM CURRICULUM PLAN - 2017 - 18 CLASS: II B.Sc. (MPC and MPCS) SEMISTER-IV PAPER: The

Department : Physics

PAPER: Thermodynamics & Radiation Physics

	-				- A								
			Name of the	e Lecturer : I	P.SAIBABU M.	Sc.(Te	ech),						
		BLE		.	CURRICU	ILAR AC	CVITY		CO-CURR	ICULAR	ACTIVI	TY	
SERIAL NUMBER	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: NOVI	EMB	ER										YEAR: 2017-18
1	3 RD WEEK	4	Introduction –Deduction of Maxwell's law of distribution of molecular speeds, experimental verification		Teaching Class	4	Yes		Ward Counseling,	4	Yes		
2	4th WEEK	4	path - Viscosity of gases-thermal conductivity-diffusion of ,Introduction- Isothermal and adiabatic process.		Teaching Class	4				4	SW?		
3	5 th WEEK	2	Reversible and irreversible processes- Carnnot's engine and its efficiency		Teaching Class	1 1	Yes		Guest Lecture	1	Yes		
MON	TH: DECE	EMBI	ER										YEAR: 2017-18
4	l st WEEK	3	thermodynamics. Kelvin's and Claussius statements-Entropy, physical significance—Change in entropy in reversible and irreversible processes	3	Teaching Class	3	Yes						
5	2 ND WEEK	4	Entropy and disorder-Entropy of Universe-Temperature-Entropy (T-S) diagram and its uses - Change of entropy of a perfect gas- change of entropy when ice changes into steam.		Teaching Class	4	Yes		Ward Counseling,	十	Yes		

6	3 rd WEEK		I MID Examinations							
7	4th WEEK	4	Thermodynamic potentials- Derivation of Maxwell's thermodynamic relations-Clausius- Clayperon's equation-Derivation for ratio of specific heats-Derivation for difference of two specific heats for perfect gas.	Teaching Class	4	Yes	/ard nseling	4	Yes	
8	5 th WEEK	2	Joule Kelvin effect-expression for Joule Kelvin coefficient for perfect and vander Waal's gas.	 Teaching Class	2	Yes		2	чер	
MON	TH: JANU	JARY		 			 			 YEAR: 2017-18
9	l ST WEEK	3	Introduction-Joule Kelvin effect- Porous plug experiment - Joule expansion-Distinction between adiabatic and Joule Thomson expansion	Teaching Class	3	Yes	 uest cture,	1	Yes	
10	2 ND WEEK	4	Expression for Joule Thomson cooling-Liquefaction of helium, Kapitza's method-Adiabatic demagnetization, Production of low temperatures	Teaching Class	4	Yes	tudy ojects	4	Yes	
11	3 RD WEEK		PONGAL HOLIDAYS				<u>-</u> -			
12	4 TH WEEK	3	Applications of substances at lowtemperature-effects of chloro and fluoro carbons on ozone layer,Blackbody-Ferry's black body-distribution of energy in the spectrum of black body	Teaching Class	3	Yes		2	120	34

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13	5 th WEEK	1	Wein's displacement law, Wein's law,		Teaching Class	1				١	nes	
MON	TH: FEBR	UAR	RY									YEAR: 2017-18
14	1 ST WEEK	4	Rayleigh-Jean's law-Quantum theory of radiation-Planck's law-Measurement of radiation		Teaching Class	4	Yes					
15	2 ND WEEK		II MID Examinations									
16	3 RD WEEK	3	Types of pyrometers-Disappearing filament optical pyrometer-experimental determination – Angstrompyrheliometer-		Teaching Class	3	Yes		Quiz	1	Yes	
17	4 TH WEEK	2	Determination of solar constant, Temperature of Sun.		Teaching Class	2	Yes					
MON	TH: MAR	СН								Ā		 YEAR: 2017-18
18	1 ST WEEK	2	REVESION	6	Teaching Class	2	Yes	1	Study Project	2	Yes	
19	2 ND WEEK	2	REVESION		Teaching Class	2	Yes		Group Discussion	2	Yes	
20	3 RD WEEK		SEMESTER END EXAMINATIONS		Teaching Class	1	Yes			ì	ny	
21	4 TH WEEK		SEMESTER END EXAMINATIONS									
MON	TH: APRI	 L										YEAR: 2017-18
22	I ST WEEK		SEMESTER END EXAMINATIONS							Þ		

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23	2 ND WEEK	PRACTICAL EXAMINATIONS				
24	3 rd WEEK	PRACTICAL EXAMINATIONS				

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V.S.M.COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN - 2017 - 18

Department : Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

PAPER: Waves & Oscillations

			Name	of the Lecture	er : V.NAGABA	BU, M	I.Sc						
	23			ADDITIONAL	CURRICU	LAR ACT			CO-CURR	ICULAR	_		į,
SERIAL NUMBER	MONTII	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: NOVE	ЕМВЕ	R										YEAR: 2017-18
1	4th WEEK	4	Simple harmonic oscillator, and solution of the differential equation— Physical . characteristics of SHM		Teaching Class	4				2_	yes		
2	5 th WEEK	3	torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g'		Teaching Class	2	Yes		Guest Lecture	1	Yes		
MON	TH: DECE	ЕМВЕ	R		S.						22		YEAR: 2017-18
3	I ST WEEK	3	combination of two mutually perpendicular simple harmonic vibrations of same frequency.		Teaching Class	3	Yes			2	yes		
4	2 ND WEEK		Lissajous figures, Damped harmonic oscillator, solution of the differential equation of damped oscillator.		Teaching Class	4	Yes		Ward Counseling,	2	Yes		
5	3 rd WEEK		I MID Examinations										
6	4th WEEK	2	Energy considerations.Relaxation time quality factor		Teaching Class	2	Yes		Ward Counseling	2	Yes		
7	5 th WEEK	2	differential equation of forced oscillator and its solution. logarithmic decrement.		Teaching Class	2	Yes						

MON	TH: JANU	ARY									YEAR: 2017-18
8	l ST WEEK	3	Complex vibrations Fourier theorem and evaluation of the Fourier coefficients.	Teaching Class	3	Yes	Guest Lecture,	1	Yes		
9	2 ND WEEK	4	Analysis of periodic wave functions- square wave, triangular wave.Longitudinal vibrations in bars.	Teaching Class	4	Yes	Study Projects	2_	Yes		
10	3 RD WEEK		PONGAL HOLIDAYS								
11	4 TH WEEK	3	wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar fixed	Teaching Class	3	Yes		2	yes		
12	5 th WEEK	1	Transverse wave propagation along a stretched string.	Teaching Class	1						
MON	TH: FEBR	UAR	Y								YEAR: 2017-18
13	l ST WEEK	4	General solution of wave equation and its significance, General solution of wave equation and its significance.	Teaching Class	4	Yes		2	7e <u>S</u>	. <u>.</u>	
14	2 ND WEEK		II MID Examinations								
15	3 RD WEEK	3	Modes of vibration of stretched string clamped at both ends,Overtones,	Teaching Class	3	Yes	Quiz	1	Yes		
16	4 TH WEEK	2	energy transport, transverse impedance.	Teaching Class	2	Yes					
MON	NTH: MAR	СН									YEAR: 2017-18
17	l ST WEEK	2	Ultrasonics Ultrasonics, properties of ultrasonic	Teaching Class	2	Yes	Study Project	1	Yes		

18	2 ND WEEK	2	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.	Teaching Class	2	Yes		Group Discussion	1	Yes	
19	3 RD WEEK	1	SEMESTER END EXAMINATIONS								
20	4 TH WEEK		SEMESTER END EXAMINATIONS				())				
MON	TH: APRII	L									YEAR: 2017-18
21	I ST WEEK		SEMESTER END EXAMINATIONS								
22	2 ND WEEK		PRACTICAL EXAMINATIONS								
23	3 rd WEEK		PRACTICAL EXAMINATIONS								

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V.S.M.COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN - 2017 - 18

Department: Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

PAPER: Waves & Oscillations

			Name	of the Lecture	er : R.Nageswar	a Rao	M.Sc.(Te	ech.),B.Ed	t				
	ચ્ ર	щ		ADDITIONAL	CURRICU		VITY		CO-CURI	RICULAR	ACTIV		
SERIAL	MONTII	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: NOVE	емве	R										YEAR: 2017-18
1	- 4th WEEK	4	Simple harmonic oscillator, and solution of the differential equation— Physical . characteristics of SHM		Teaching Class	4							
2	5 th WEEK	3	torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g'		Teaching Class	2	Yes		Guest Lecture	1	Yes		
MON	TH: DECE	MBE	R	- -									YEAR: 2017-18
3	l st WEEK	3	combination of two mutually perpendicular simple harmonic vibrations of same frequency.		Teaching Class	3	Yes						
4	2 ND WEEK	4	Lissajous figures, Damped harmonic oscillator, solution of the differential equation of damped oscillator.		Teaching Class	4	Yes		Ward Counseling,	4	Yes	:	~
5	3 rd WEEK		I MID Examinations										
6	4th WEEK		Energy considerations.Relaxation time quality factor		Teaching Class	2	Yes		Ward Counseling	2	Yes		
7	5 th WEEK	2	differential equation of forced oscillator and its solution. logarithmic decrement.		Teaching Class	2	Yes						

MON	TH: JANU	ARY										YEAR: 2017-18
8	l ST WEEK	3	Complex vibrations Fourier theorem and evaluation of the Fourier coefficients.	Teaching Class	3	Yes		Guest Lecture,	1	Yes	Λ	
9	2 ND WEEK	4	Analysis of periodic wave functions- square wave, triangular wave.Longitudinal vibrations in bars.	Teaching Class	4	Yes		Study Projects	4	Yes		
10	3 RD WEEK		PONGAL HOLIDAYS									
11	4 TH WEEK	3	wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar fixed	Teaching Class	3	Yes		·2				
12	5 th WEEK	1	Transverse wave propagation along a stretched string.	Teaching Class	1							
MON	TH: FEBR	UAR	Y				_					YEAR: 2017-18
13	1 ST WEEK	4	General solution of wave equation and its significance, General solution of wave equation and its significance.	Teaching Class	4	Yes						
14	2 ND WEEK		II MID Examinations									
15	3 RD WEEK	3	Modes of vibration of stretched string clamped at both ends,Overtones,	Teaching Class	3	Yes		Quiz	1_	Yes		
16	4 TH WEEK	2	energy transport, transverse impedance.	Teaching Class	2	Yes						
MON	NTH: MAR	CH										YEAR: 2017-18
17	l ST WEEK	2	Ultrasonics Ultrasonics, properties of ultrasonic	Teaching Class	2	Yes		Study Project	2	Yes		

18	2 ND WEEK	2	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.	Teaching Class	2	Yes	Group Discussion	2	Yes	
19	3 RD WEEK	1	SEMESTER END EXAMINATIONS							
20	4 TH WEEK		SEMESTER END EXAMINATIONS							
MON	TH: APRII	L								YEAR: 2017-18
21	1 ST WEEK		SEMESTER END EXAMINATIONS							
22	2 ND WEEK		PRACTICAL EXAMINATIONS		-					
23	3 rd WEEK		PRACTICAL EXAMINATIONS							

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Chamisto Strason Academic Advises

V. S. M. COLLEGE: RAMACHANDRAPURAM

PAPER: III - Electricity, Magnetism and Electronics

CURRICULUM PLAN 2016-17

Department: Physics

CLASS: III B.Sc. (MPC)

Name of the Lecturer: Dr. K. Srinivasa Rao, M.Sc., M.Phil., Ph.D

			Name of the Lect	<u>urer : Dr. K. Sri</u>	nivasa Kao, M.S	c., M.Phi	L, Ph.D					_	
	I				CURRICU	LAR ACT	VITY		CO-CURRI	CULAR /	ACTIVIT		
SERIAL	MONTI! &	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MOI	NTH: JU	NE										YEAR	2016-17
1	3 RD WEEK	4	Introduction to static electricity Gauss law statement	Electrification	Teaching Class	4	Yes						
2	4 TH WEEK	2	proof E due to Uniformly charged sphere.	Electrification	Teaching Class	2	Yes						
MO	NTH: JUI	LY							75			YEAR	: 2016-17
3	i ST WEEK	4	charged cylindrical conductor and an infinite conducting sheet of charge, Deduction of Coulmb's law from Gauss law.	Electrification	Teaching Class	4	Yes						
4	2 ND WEEK	4	Mechanical force on a charged conductor, Electric potential – Potential due to a charged spherical conductor.	Bad conductor	Teaching Class	4	Yes		Ward Counseling		Yes		
5	3 RD WEEK	4	Electric field strength from the electric dipole and an infinite line of charge, Electric field strength from the electric dipole and an infinite line of charge. Potential of a uniformly charged circular disc and problems.	Related problems	Teaching Class Unit I	4	Yes		Book Reviews		Yes		

6	4 TH WEEK	4	An atomic view – Polar and non-polar dielectrics in electric field, An atomic view – Polar and non-polar dielectrics in electric field-potential energy of a dipole in an electric field.	Freq. variations	Teaching Class Assignment	4	Yes	Ward Counseling		Yes		
МО	NTH: AU	GUST	21		+						YEAR:	: 2016-17
8	l ST WEEK	2	Polarization and charge density Dielectrics and Gauss law - relation between D,E, and P vectors, Dielectric constant and susceptibility – boundary conditions at the dielectric surface.		Teaching Class Assignment	2	Yes					
9	2 ND WEEK	3	Capacity- working principle, Capacity of a concentric spheres and cylindrical condenser – capacity of a parallel plate condenser with and without dielectric.	Applications	Teaching Class	3	Yes	Ward Counseling		Yes		
10	3 RD WEEK	4	Force between plates of condenser – attracted disc electrometer construction and working, measurement of dielectric constant and potential difference. and problems.		Teaching Class Unit II	3 1	Yes	Group Discussion	1	Yes		
11	4 TH WEEK	- 1	Magnetic shell – potential due to magnetic shell – field due to magnetic shell – equivalent of electric circuit and magnetic shell. Application of field due to magnetic shell – magnetic induction (B) – Permeability and susceptibility Relation among B,H	X- ray production	Teaching Class	3	Yes	Ward Counseling	i	Yes		
7	5TH WEEK	1	I. Hysteresis loop and energy		Teaching Class	1	Yes			!		

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МО	NTH: SEI	РТЕМ	BER								YEAR:	2016-17
12	I ST WEEK	2	Hall effect – cyclotron – synchrocyclotron and synchrotron		Teaching Class Assignment	1 1	Yes	Study Projects	1	Yes		
13	2 ND WEEK	2	force on a current carrying conductor placed in a magnetic field, force and torque on a current loop	1	Teaching Class	2	Yes	Ward Counseling, Book Reviews	¥	Yes		
14	3 RD WEEK	3	Biot -Savart's law and calculation of B due to long straight wire, a circular current loop and solenoid and problems.Faraday's law,Lenz's law,expression for induced emf - time varying magnetic fields		Teaching Class Unit III	2	Yes	QUIZ	1	Yes		
15	4 TH WEEK	4	Betatron, Ballistic galvanometer, self and mutual inductance. Coefficient of coupling, calculation of self inductance of a long solenoid – toroid – energy stored in magnetic field –		Teaching Class Unit Test - 2 Practical	3	Yes	Ward Counseling Seminars	1	Yes		
16	5TH WEEK	3	Transformer – Construction, working, energy losses and efficiencyand problems.Growth and decay of currents in LR, CR circuits.		Teaching Class	2	Yes	Group Discussion	1	Yes		
MON	TH: OC	гове	R					 			YEAR: 2	2016-17
17	Ind WEEK	3	LCR circuits – Critical damping.		Teaching Class Assignment	1	Yes					

18	2nd WEEK	4	Alternating current relation between current and voltage in pure R,C and L-vector diagrams — Power in ac circuits. LCR series and parallel resonant circuit — Q-factor.	Tuned circuits in	Teaching Class	4	Yes	Ward Counseling, Class Room Seminars	1	Yes		
19	зтн WEEK	4	AC & DC motors-single phase, three phase.Magnetic Equations and electromagnetic waves: A review of basic laws of electricity and magnetism, Displacement current	Battery eliminators and adopters	Teaching Class MID Exam I	4	Yes	Ward Counseling		Yes		
20	4th WEEK	3	Maxwell's equations in differential form – Maxwell's wave equation		Teaching Class	3	Yes					
MON	TH: NO	VEME	ER								YEAR:	2016-17
21	l ST WEEK	4	plane electromagnetic waves, Transverse nature of electromagnetic waves Poynting vector – production of electromagnetic waves (Hertz's experiment) Formation of electron energy bands in solids, classification of solids in terms of forbidden energy gap. Intrinsic and extrinsic semiconductors, Fermi level,		Teaching Class	4	Yes	Guest Lecture,Class Room Seminars		Yes		
22	2 ND WEEK	3	continuity equationIntrinsic and extrinsic semiconductors, Fermi level, continuity equation. p-n junction diode, Zener diode characteristicsTransistor as an amplifier concept of negative feed back and positive feed back – Barkhausen criterion.	MOSFET IC fabrication principle	Teaching Class	2	Yes	Ward Counseling, Quiz	1	Yes		

23	3 RD WEEK		zener diode voltage regulator. Half wave and full wave rectifiers and filters, ripple factor (quantitative)								Yes		
24	4th WEEK		p n p and n p n transistors, current components in transistors, CB,CE and CC configurations –								Yes		
MOI	NTH: DE	CEMI	BER					•				YEAR	: 2016-17
25	1 ST WEEK	3	HALF-YEARLY EXAMINATIONS - 2016		Teaching Class	2	Yes	War Couns Semir	eling	1	Yes		
26	2 ND WEEK	3	HALF-YEARLY EXAMINATIONS - 2016		Teaching Class	2	Yes	Wai Counse Stud Proje	ling, y	1	Yes		
27	3 rd WEEK	3	transistor hybrid parameters – determination of hybrid parameters from transistor characteristics	Applications to computers	Teaching Class Unit V	2	Yes	Guest Le	cture		Yes		
28	4 TH WEEK	2	Transistor as an amplifier — concept of negative feed back and positive feed back — Barkhausen criterion		Teaching Class	2	Yes	War Counse			Yes		
29	5TH WEEK	3	Binary number system, converting Binary to Decimal and vice versa.		Teaching Class	2	Yes	Qui		1	Yes		
MON	TH: JAN	UAR'	Y									YEAR:	2016-17
30	l ST WEEK	3	Binary addition and subtraction (1's and 2's complement methods). Hexadecimal number system.Conversion from Binary to Hexadecimal		Teaching Class MID Exam II	1 1	V	Gue Lectu Study Pı	e,	1	Yes		i

31	3 RD WEEK	2	Decimal to Hexadecimal vice versa.NAND, NOR as universal gates, Exclusive – OR gate.	Teaching Class Assignment	1					
32	4 TH WEEK	2	De Morgan's Laws – statement and proof, Half and Full adders. Parallel adder circuits.	 Teaching Class	2					
MON	YTH: FEE	BRUAI	RY					 	YEAR:	2016-17
33	l ST WEEK	4	REVISION	Teaching Class	3		Group Discussion	 Yes		
34	2 ND WEEK	3	REVISION	 Teaching Class	2					
35	3 RD WEEK	2	REVISION	 Teaching Class	3					
36	4 TH WEEK	2	REVISION	 Teaching Class	2	: 			VEAD	2016-17
MOI	ТН: МА	RCH		 				Ι	IEAR	2010-17
37	l ST WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016	 						
38	2 ND WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016							

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SIGNATURE OF THE DEPARTMENT I/C

* Dr. R. Srinivasa Pan

M.St., M.Phil., (1-7)

Head Department of Pflysics

v.S.M. College - Ramachandrapuram

East Godavan Dt. (A.P.) 533 255

S. homoujand SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (A)
ENMACHANDRAPURAM-533 255, (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN 2015-16</u>

Department: Physics

PAPER: III - Electricity, Magnetism and Electronics

CLASS: III B.Sc. (MPCS)

Name of the Lecturer: Dr. K. Srinivasa Rao, M.Sc., M.Phil., Ph.D.

				turer . Dr. R. Sr	T	_							
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SERIAL	MONTH	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MO	NTH: JUI	NE											: 2015-16
1	3 RD WEEK	2	Introduction to static electricity Gauss law statement proof E due to Uniformly charged sphere.		Teaching Class	2	Yes						
2	4 TH WEEK	3	charged cylindrical conductor and an infinite conducting sheet of charge.		Teaching Class	3	Yes						
МО	NTH: JUL	Y										YEAR:	2015-16
3	l ST WEEK	3	Equipotential lines, Electric Flux, Gauss law related problems assignments.	Electrification	Teaching Class	3	Yes						
4	2 ND WEEK	3	Deduction of Coulmb's law from Gauss law Mechanical force on a charged conductor Electric potential – Potential due to a charged spherical conductor.	Bad conductor	Teaching Class	3	Yes		Ward Counseling		Yes		
5	3 RD WEEK		Electric field strength from the electric dipole and an infinite line of charge.	Related problems	Teaching Class Unit I	3	Yes		Book Reviews		Yes		

6	4 TH WEEK	4	Electric field strength from the electric dipole and an infinite line of charge. Potential of a uniformly charged circular disc and problems. An atomic view – Polar and non-polar dielectrics in electric field	Freq. variations	Teaching Class Assignment	3 1	Yes	Ward Counseling		Yes		
7	5TH WEEK	2	An atomic view – Polar and non-polar dielectrics in electric field- potential energy of a dipole in an electric field.		Teaching Class	2	Yes					
МО	NTH: AU	GUST									YEAR	: 2015-16
8	l ST WEEK	3	Polarization and charge density Dielectrics and Gauss law - relation between D,E, and P vectors, Dielectric constant and susceptibility – boundary conditions at the dielectric surface.		Teaching Class Assignment	2	Yes					
9	2 ND WEEK	2	Capacity- working principle, Capacity of a concentric spheres and cylindrical condenser — capacity of a parallel plate condenser with and without dielectric.	Applications	Teaching Class	2	Yes	Ward Counseling		Yes		
10	3 RD WEEK	4	Force between plates of condenser – attracted disc electrometer construction and working, measurement of dielectric constant and potential difference. and problems.		Teaching Class Unit II	2	Yes	Group Discussion	1	Yes		
11	4 TH WEEK	3	Magnetic shell – potential due to magnetic shell – field due to magnetic shell – equivalent of electric circuit and magnetic shell. Application of field due to magnetic shell – magnetic induction (B) – Permeability and susceptibility Relation among B,H and I. Hysteresis loop.	X- ray production	Teaching Class	3	Yes	Ward Counseling		Yes		

МО	NTH: SE	PTEM	BER								YEAR:	2015-16
12	l ST WEEK	4	Hall effect – cyclotron – synchrocyclotron and synchrotron - force on a current carrying conductor placed in a magnetic field, force and torque on a current loop,	5	Teaching Class Assignment	3	Yes	Study Projects	1	Yes		
13	2 ND WEEK	3	Biot –Savart's law and calculation of B due to long straight wire, a circular current loop and solenoid and problems.	1	Teaching Class	3	Yes	Ward Counseling, Book Reviews		Yes		
14	3 RD WEEK	3	induced emf – time varying magnetic fields,Betatron,Ballistic galvanometer,self and mutual inductance.		Teaching Class Unit III	1	Yes	QUIZ	1	Yes		
15	4 TH WEEK	3	Coefficient of coupling, calculation of self inductance of a long solenoid – toroid – energy stored in magnetic field – transformer – Construction, working, energy losses and efficiency and problems.		Teaching Class Unit Test - 2 Practical	2	Yes	Ward Counseling Seminars	1	Yes		:
16	5тн WEEK	2	Growth and decay of currents in LR, CR circuits.		Teaching Class	1	Yes	Group Discussion	1	Yes		
MON	NTH: OC	ТОВЕ	R								YEAR:	2015-16
17	Ind WEEK	1	LCR circuits – Critical damping.		Teaching Class Assignment	1	Yes					
18	2nd WEEK	3	Alternating current relation between current and voltage in pure R,C and L-vector diagrams – Power in ac circuits. LCR series and parallel resonant circuit – Q-factor.	Tuned circuits in radio and T.V,	Teaching Class	2	Yes	Ward Counseling, Class Room Seminars	1	Yes		

19	3TH WEEK	3	AC & DC motors-single phase, three phase.Magnetic Equations and electromagnetic waves: A review of basic laws of electricity and magnetism,Displacement current	Battery eliminators and adopters	Teaching Class MID Exam I	3	Yes	Ward Counseling		Yes		
20	5 th WEEK	3	Maxwell's equations in differential form – Maxwell's wave equation		Teaching Class	3	Yes					
MO	NTH: NO	VEMI	BER	<u> </u>							YEAR	2015-16
21	l ST WEEK	4	plane electromagnetic waves, Transverse nature of electromagnetic waves Poynting vector – production of electromagnetic waves (Hertz's experiment) Formation of electron energy bands in solids, classification of solids in terms of forbidden energy gap. Intrinsic and extrinsic semiconductors, Fermi level,		Teaching Class	4	Yes	Guest Lecture,Class Room Seminars		Yes		
22	2 ND WEEK		continuity equationIntrinsic and extrinsic semiconductors, Fermi level, continuity equation. p-n junction diode, Zener diode characteristicsTransistor as an amplifier concept of negative feed back and positive feed back — Barkhausen criterion.	MOSFET IC fabrication principle	Teaching Class	2	Yes	Ward Counseling, Quiz	1	Yes		
23	3 RD WEEK	3	zener diode voltage regulator. Half wave and full wave rectifiers and filters, ripple factor (quantitative)			×.				Yes		
24	4th WEEK		p n p and n p n transistors, current components in transistors, CB,CE and CC configurations –							Yes		

мо	NTH: DE	CEMI	BER								YEAR	: 2015-16
25	l ST WEEK		HALF-YEARLY EXAMINATIONS - 2015		Teaching Class	2	Yes	Ward Counseling Seminars	1	Yes		
26	2 ND WEEK		HALF-YEARLY EXAMINATIONS - 2015		Teaching Class	2	Yes	Ward Counseling, Study Projects	1	Yes	¥	
27	3 rd WEEK	3	transistor hybrid parameters – determination of hybrid parameters from transistor characteristics	Applications to computers	Teaching Class Unit V	2	Yes	Guest Lecture		Yes		
28	4 TH WEEK	2	Transistor as an amplifier — concept of negative feed back and positive feed back – Barkhausen criterion,		Teaching Class	2	Yes	Ward Counseling		Yes		
29	5TH WEEK	3	RC coupled amplifier and phase shift oscillator (qualitative) Binary number system, converting Binary to Decimal and vice versa.		Teaching Class	2	Yes	Quiz	1	Yes		
MON	NTH: JAN	UAR'	Y								YEAR:	2015-16
30	l ST WEEK	~ ~	Binary addition and subtraction (1's and 2's complement methods). Hexadecimal number system.Conversion from Binary to Hexadecimal		Teaching Class MID Exam II	1		Guest Lecture, Study Project	1	Yes		
31	3 RD WEEK	2	Decimal to Hexadecimal vice versa.NAND, NOR as universal gates, Exclusive – OR gate.		Teaching Class Assignment	1						
32	4 TH WEEK	2	De Morgan's Laws – statement and proof, Half and Full adders. Parallel adder circuits.	v	Teaching Class	2						

МО	NTH: FEI	BRUA	RY						YEAR	: 2015-16
33	I ST WEEK	4	REVISION	Teaching Class	3		Group Discussion	Yes		
34	2 ND WEEK	3	REVISION	Teaching Class	2					
35	3 RD WEEK	2	REVISION	 Teaching Class	3					
36	4 TH WEEK	2	REVISION	Teaching Class	2					
MOI	тн: ма	RCH							YEAR	: 2015-16
37	l ST WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016							
38	2 ND WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016							

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SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

M.Sc., M.Phil., Ph.D.
Head-Department of Physics
v.S.M. College - Ramachandraguzant
East Godavan Dt. (A.P.) 533 2 :5

SAME SIGNATURE OF THE PRINCIPAL

PEUNCIPAL, V.S.M. COLLEGE (A) RAMACHANDRAPURAM-533 255, (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM

PAPER: IV - Modern Physics

CURRICULUM PLAN 2016 - 17

Department: Physics

CLASS: III B.Sc. (MPC)

Name of the Lecturer: V. Naga Babu M.Sc.

			Name	of the Lecturer: V	<u>'. Naga Babu m</u>	.Sc.							
	ed .				CURRIC	ULAR AC	TVITY		CO-CURR	ICULAR	ACTIVI	ΓY	
SERIAL	MONTII 8 WEEK	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MOI	TH: JUI	VE.										YEAR	: 2016-17
1	3 rd WEEK	4	Introduction – Drawbacks of Bohr's atomic model, Sommerfeld's elliptical orbits – relativistic correction (no derivation).		Teaching Class	4							
2	4 th WEEK	4	Stern & Gerlach experiment Vector atom model and quantum numbers associated with it.L-S and j-j coupling schemes.		Teaching Class	4							
MON	TH: JUL	Υ										YEAR	: 2016-17
3	l st WEEK	1	Spectral terms, selection rules,		Teaching Class	1							
4	2 nd WEEK	2	intensity rules. Spectra of alkali atomsdoublet fine structure.		Teaching Class	2			Ward Counseling		Yes		
5	3 rd WEEK	3	Zeeman Effect, Paschen-Back Effect and Stark Effect (basic idea).		Teaching Class Unit I	2			Book Reviews		Yes		
6	– 4 th WEEK	4	Types of molecular spectra, pure rotational energies and spectrum of diatomic molecule, determination of internuclear distance.		Teaching Class Assignment	3			Ward Counseling		Yes		

		_		 							,
7	5 th WEEK	3	Vibrational energies and spectrum of diatomic molecule.Raman effect	Teaching Class	3						
МО	NTH: AU	GUST			•	•				YEAR	: 2016-17
8	l st WEEK	4	Raman effect, Experimental arrangement for Raman effect and its applications. Spectral radiation – Planck's law.	Teaching Class Assignment	3				i		
9	2 nd WEEK	3	Compton's effect (quantitative) experimental verification. Stability of an atomBohr's atomic theory.	Teaching Class	3		Ward Counseling		Yes		
10	3 rd WEEK	3	Limitations of old quantum theory.De Broglie's hypothesis,wavelength of matter waves	Teaching Class Unit II	2						
11	4 th WEEK	3	properties of matter waves. Phase and group velocities. Vibrational energies and spectrum of diatomic molecule.	Teaching Class	3		Group Discussion	1	Yes		
12	5 th WEEK	2	Davisson and Germer experiment. Double slit experiment.	Teaching Class	2						
MON	NTH: SEP	темі	BER			·				YEAR:	2016-17
13	l st WEEK	4	Standing de Brogile waves of electron in Bohr orbits.Heisenberg's uncertainty principle for position and momentum (x and px), Energy and time (E and t).	Teaching Class Assignment	3		Study Projects		Yes		
14	2 nd WEEK	3	Gamma ray microscope. Diffraction by a single slit. Position of electron in a Bohr orbit. Particle in a box. Complementary principle of Bohr.	Teaching Class	3		Ward Counseling		Yes		

15	3 rd WEEK	4	Schrodinger time independent and time dependent wave equations. Wave function properties – Significance.		Teaching Class	3 1		QUIZ	1	Yes		
16	4 th WEEK	4	Basic postulates of quantum mechanics. Operators, eigen functions and eigen values, expectation values. Application of Schrodinger wave equation to particle in one dimension.		Teaching Class	4		Ward Counseling, Book Reviews	1	Yes		
МО	NTH: OC	тов	ER				'				YEAR	: 2016-17
17	I st WEEK	4	Basic properties of nucleus – size, charge, mass, spin, magnetic dipole moment and electric quadrupole moment.		Teaching Class	4		Ward Counseling		Yes		2010-17
18	2 nd WEEK	3	Binding energy of nucleus, deuteron binding energy, p-p and n-p scattering (concepts)Nuclear forces. Nuclear models – liquid drop model, shell model.		Teaching Class Unit IV	2		Ward Counseling, Class Room Seminars	1	Yes		
19	3 rd WEEK	4	Range of alpha particles, Geiger – Nuttal law. Gammow's theory of alpha decay.		Teaching Class	4		Ward Counseling		Yes		
20	5 th WEEK	3	Geiger – Nuttal law from Gammow's theory. Beta spectrum – neutrino hypothesis, Fermi's theory of β-decay (qualitative).	7	Feaching Class	3						
MON	TH: NOV	'EMB					,				YEAR:	2016-17
21	l st WEEK	ا '	Types of nuclear reactions, channels, nuclear reaction kinematics.Compound nucleus, direct reactions (concepts).GM counter.	Т	eaching Class	3		Study Projects		Yes		
22	2 nd WEEK	4	proportional counter, scintillation counter. Wilson cloud chamber and solid state detector Crystalline nature of matter.	Т	eaching Class	4		Ward Counseling, Quiz	1	Yes		

23	3 rd WEEK	4	Cystal lattice, Unit Cell, Elements of symmetry. Crystal systems. Bravais lattices. Miller indices. Simple crystal structures (S.C., BCC, CsCl, FCC, NaCl diamond and Zinc Blends)		Teaching Class	4		Guest Lecture,Clas s Room Seminars	1	Yes		
24	4 th WEEK	4	Diffraction of X -rays by crystals.Bragg's law, Experimental techniques - Laue's method and powder method.		Teaching Class	4		Ward Counseling Seminars	1	Yes		
25	5 th WEEK	4	Introduction, nanoparticles, metal nanoclusters, semiconductor nanoparticles, carbon clusters, carbon nanotubes, quantum nanostructures.		Teaching Class	4	5 5 5					
MOI	NTH: DE	СЕМВ	BER	-					·		YEAR	: 2016-17
26	l st WEEK		HALF-YEARLY EXAMINATIONS - 2016									
27	2 nd WEEK		HALF-YEARLY EXAMINATIONS - 2016						ļ			
28	3 rd WEEK		nanodot, nanowire and quantum well. Fabrication of quantum nanostructures. Types of bonding in crystals – characteristics of crystals with different bindings.		Teaching Class	4						

29	4 th WEEK	3	Lattice energy of ionic crystals – determination of Medelung constant for NaCl crystal, Born – Haber cycle. Magnetic properties of dia, para and ferromagnetic materials.	;	Teaching Class Unit V	3 1						
MO	NTH: JA!	VUAR								4	YEAR	2016-17
30	l st WEEK	4	Langevin's theory of paramagnetism. Weiss' theory of ferromagnetism —Concepts of magnetic domains, antiferromagnetism and ferrimagnetism ferrites and their applications. Basic experimental facts — zero resistance.		Teaching Class	2		Guest Lecture,Stud y Project	31			
31	2 nd WEEK		Effect of magnetic field, Meissner effect, persistent current, Isotope effect Thermodynamic properties, specific heat, entropy. Type I and Type II superconductors. Elements of BCS theory-Cooper pairs. Applications. High temperature superconductors.		Teaching Class	3		Ward Counseling				
32	3 rd WEEK		PONGAL HOLIDAYS									
33	4 th WEEK	3	REVISION		Teaching Class	3						
34	5 th WEEK	3	REVISION		Teaching Class	3						
MON	гн: геві	RUAR	Y								YEAR:	2016-17
35	l st WEEK	4	REVISION		Teaching Class	3	Yes	Group Discussion				

36	2 nd WEEK	3	REVISION		Teaching Class	2	Yes				
37	3 rd WEEK	2	REVISION		Teaching Class	3	Yes				
38	4 th WEEK	2	REVISION	4	Teaching Class	2	Yes	23			
MON	TH: MA	RCH		-						YEAR:	2016-17
39	l st WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2017								
40	2 nd WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2017								

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Ruo

M.Sc., M.Phil., Ph.D.

Head Department of Physics
V.S.M. College - Ramachandrapuram
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S Ramanijani SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE (#: BANACHANDRAPURAM-533 255, (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM

PAPER: IV - Modern Physics

CURRICULUM PLAN 2016 - 17

Department: Physics

CLASS: III B.Sc. (MPCs)

Name of the Lecturer: V. Naga Babu M.Sc.

	ed e			of the Lecturer : V	1 -	ULAR AC	TVITY		CO-CURR	ICULAR	ACTIVI	TY	
SERIAL	MONTH &	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MOI	NTH: JUI	NE										YEAR	: 2016-17
1	3 rd WEEK	4	Introduction – Drawbacks of Bohr's atomic model, Sommerfeld's elliptical orbits – relativistic correction (no derivation).		Teaching Class	4							
2	4 th WEEK	4	Stern & Gerlach experiment Vector atom model and quantum numbers associated with it.L-S and j-j coupling schemes.		Teaching Class	4							
MON	TH: JUL	Y										YEAR	: 2016-17
3	l st WEEK	1	Spectral terms, selection rules,		Teaching Class	1							
4	2 nd WEEK	2	intensity rules. Spectra of alkali atomsdoublet fine structure.		Teaching Class	2			Ward Counseling		Yes		
5	3 rd WEEK	3	Zeeman Effect, Paschen-Back Effect and Stark Effect (basic idea).		Teaching Class Unit I	2			Book Reviews		Yes		
6	4 th WEEK	4	Types of molecular spectra, pure rotational energies and spectrum of diatomic molecule, determination of internuclear distance.		Teaching Class Assignment	3			Ward Counseling		Yes		

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7	5 th WEEK	3	Vibrational energies and spectrum of diatomic molecule.Raman effect	Teaching Class	3					
МО	NTH: AU	GUST	•			 			YEAR	2016-17
8	1 st WEEK	4	Raman effect, Experimental arrangement for Raman effect and its applications. Spectral radiation – Planck's law.	Teaching Class Assignment	3		×			:
9	2 nd WEEK	3	Compton's effect (quantitative) experimental verification. Stability of an atomBohr's atomic theory.	Teaching Class	3	Ward Counseling		Yes		į
10	3 rd WEEK	3	Limitations of old quantum theory.De Broglie's hypothesis,wavelength of matter waves	Teaching Class Unit II	2					
11	4 th WEEK	3	properties of matter waves.Phase and group velocities.Vibrational energies and spectrum of diatomic molecule.	Teaching Class	3	Group Discussion	1	Yes		
12	5 th WEEK	2	Davisson and Germer experiment. Double slit experiment.	Teaching Class	2					
MON	TH: SEP	TEMI	BER						YEAR:	2016-17
13	l st WEEK	4	Standing de Brogile waves of electron in Bohr orbits.Heisenberg's uncertainty principle for position and momentum (x and px), Energy and time (E and t).	Teaching Class Assignment	3	Study Projects		Yes		
14	2 nd WEEK	3	Gamma ray microscope. Diffraction by a single slit. Position of electron in a Bohr orbit. Particle in a box. Complementary principle of Bohr.	Teaching Class	3	Ward Counseling		Yes		

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15	3 rd WEEK	4	Schrodinger time independent and time dependent wave equations. Wave function properties – Significance.	0.5	Teaching Class Unit III	3		QUIZ	1	Yes		
16	4 th WEEK	4	Basic postulates of quantum mechanics. Operators, eigen functions and eigen values, expectation values. Application of Schrodinger wave equation to particle in one dimension.		Teaching Class	4		Ward Counseling, Book Reviews	1	Yes		
MO	NTH: OC	TOBE	ER								YEAR	: 2016-17
17	I st WEEK	4	Basic properties of nucleus – size, charge, mass, spin, magnetic dipole moment and electric quadrupole moment.		Teaching Class	4		Ward Counseling		Yes		
18	2 nd WEEK	3	Binding energy of nucleus, deuteron binding energy, p-p and n-p scattering (concepts)Nuclear forces. Nuclear models – liquid drop model, shell model.		Teaching Class Unit IV	2		Ward Counseling, Class Room Seminars	1	Yes		
19	3 rd WEEK	4	Range of alpha particles, Geiger – Nuttal law. Gammow's theory of alpha decay.		Teaching Class	4		Ward Counseling		Yes		
20	5 th WEEK	3	Geiger – Nuttal law from Gammow's theory. Beta spectrum – neutrino hypothesis, Fermi's theory of β-decay (qualitative).		Teaching Class	3						
MON	TH: NOV	VEME	EER								YEAR:	2016-17
21	I st WEEK	3	Types of nuclear reactions, channels, nuclear reaction kinematics.Compound nucleus, direct reactions (concepts).GM counter.		Teaching Class	3		Study Projects		Yes		
22	2 nd WEEK	4	proportional counter, scintillation counter. Wilson cloud chamber and solid state detector Crystalline nature of matter.		Teaching Class	4	:	Ward Counseling, Quiz	1	Yes		

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23	3 rd WEEK	4	Cystal lattice, Unit Cell, Elements of symmetry. Crystal systems. Bravais lattices. Miller indices. Simple crystal structures (S.C., BCC, CsCl, FCC, NaCl diamond and Zinc Blends)		Teaching Class	4		Guest Lecture,Clas s Room Seminars	1	Yes		
24	4 th WEEK	4	Diffraction of X –rays by crystals.Bragg's law, Experimental techniques - Laue's method and powder method.	*	Teaching Class	4		Ward Counseling Seminars	1	Yes		
25	5 th WEEK	4	Introduction, nanoparticles, metal nanoclusters, semiconductor nanoparticles, carbon clusters, carbon nanotubes, quantum nanostructures.		Teaching Class	4						
MOI	NTH: DEC	СЕМВ	ER								YEAR	: 2016-17
26	l st WEEK		HALF-YEARLY EXAMINATIONS - 2016									
27	2 nd WEEK		HALF-YEARLY EXAMINATIONS - 2016									
28	3 rd WEEK		nanodot, nanowire and quantum well. Fabrication of quantum nanostructures. Types of bonding in crystals – characteristics of crystals with different bindings.		Teaching Class	4						

29	4 th WEEK	3	Lattice energy of ionic crystals – determination of Medelung constant for NaCl crystal,Born – Haber cycle.Magnetic properties of dia, para and ferromagnetic materials.	Teaching Class Unit V	3 1						
MOI	YTH: JAI	NUAR	Y							YEAR:	2016-17
30	l st WEEK	4	Langevin's theory of paramagnetism. Weiss' theory of ferromagnetism –Concepts of magnetic domains, antiferromagnetism and ferrimagnetism ferrites and their applications. Basic experimental facts – zero resistance.	Teaching Class	2	:		Guest Lecture,Stud y Project			
31	2 nd WEEK	3	Effect of magnetic field, Meissner effect, persistent current, Isotope effect Thermodynamic properties, specific heat, entropy. Type I and Type II superconductors. Elements of BCS theory-Cooper pairs. Applications. High temperature superconductors.	Teaching Class	3			Ward Counseling			
32	3 rd WEEK		PONGAL HOLIDAYS				<u> </u>				
33	4 th WEEK	3	REVISION	 Teaching Class	3						
34	5 th WEEK	3	REVISION	Teaching Class	3						
MON	TH: FEBRUARY							 _	YEAR:	2016-17	
35	ı st WEEK	4	REVISION	Teaching Class	3	Yes		Group Discussion			

36	2 nd WEEK	3	REVISION		Teaching Class	2	Yes	-			
37	3 rd WEEK	2	REVISION		Teaching Class	3	Yes				
38	4 th WEEK	2	REVISION	O.	Teaching Class	2	Yes	4.3			
MON	ONTH: MARCH								 	YEAR	2016-17
39	l st WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2017								
40	2 nd WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2017								

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

10. do-10

MSt., M.Phil., Ph.D.

Head Department of Physics

V.S.M. College - Remachiandrapuram

East Godavan Dt (A.P.) 533 255

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V.S.M.COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN - 2016 - 17

LASS: II B.Sc. (MPC and MPCS) SEMISTER-III

Department: Physics

PAPER III: - Wave Optics

Name of the Lecturer: N.Satish M.Sc. HOURS AVAILABLE CURRICULAR ACTVITY CO-CURRICULAR ACTIVITY SERIAL NUMBER MONTH WEEK WHETHER IF NOT, ALTERNATE DATE ADDITIONAL INPUTS IF NOT, ALTERNATE DATE WHETHER HOURS ALLOTTED SYLLABUS TOPICS ACTIVITY / VALUES ADDITION MONTH: JULY YEAR: 2016-17 Introduction monochromatic Teaching Class 2 aberrations, spherical aberration. WEEK Yes Yes Assignment methods of minimizing spherical 2^{ND} aberration, coma, astigmatism and Ward Teaching Class WEEK 3 Yes Yes curvature of field, distortion. Counseling 3RD Chromatic aberration-the achromatic 3 doublet.Achromatism for two lenses (i)in Book Teaching Class **WEEK** 4 Yes Yes contact and (ii) separated by a distance. Reviews Principle of superposition - coherence-4TH 4 temporal coherence and spatial coherence-Ward Teaching Class **WEEK** 3 Yes Yes conditions for interference of light. Counseling Fresnel's biprism-determination of 5th Guest 5 Teaching Class wavelength of light -change of phase on 1 Lecture. 1 WEEK Yes Yes Unit II 1 reflection. Class Room 1 Seminars **MONTH: AUGUST** YEAR: 2016-17 6 I MID Examinations **WEEK** Yes

7	2 ND WEEK	3	Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (cosine law) -colors of thin films-Interference by a film with two non-parallel reflecting surfaces (Wedge shaped film).	Teaching Class	3	Yes	Ward Counseling		Yes		
8	3 RD WEEK	3	Determination of diameter of wire, Newton's rings in reflected light. Michelson interferometer, Determination of wavelength of monochromatic light using Newton's rings and Michelson Interferometer.	Teaching Class Unit II	2 1	Yes	Group Discussion	1	Yes		
9	4 TH WEEK	4	Introduction, distinction between Fresnel and Fraunhoffer diffraction, Fraunhoffer diffraction Diffraction due to single slit-Fraunhoffer diffraction due to double slit-Fraunhoffer diffraction pattern with N slits (diffraction grating). Resolving power of grating	Teaching Class	4	Yes	Ward Counseling		Yes		
MOI	TH: SEP	TEM	BER							VEAD	2016-17
10	I ST WEEK		Determination of wavelength of light in normal incidence and minimum deviation methods using diffraction grating	Teaching Class Assignment	2	Yes	Study Projects		Yes	1 EAR	2010-17
11	2 ND WEEK	3	Fresnel's half period zones-area of the half period zones-zone plate-comparison of zone plate with convex lens-difference between interference and diffraction.	Teaching Class	3	Yes	Ward Counseling, Book Reviews	1	Yes		
12	3 RD WEEK		II MID Examinations								

13	3 4 TH WEEK	4	Polarized light: methods of polarization polarization by reflection, refraction, double refraction, scattering of light-Brewster's law-Mauls law-Nicol prism polarizer and analyzer	Teaching Class Unit f l	2 1	Yes	QUIZ	1	Yes		
14	5 th WEEK	4	Quarter wave plate, Half wave plate-optical activity, determination of specific rotation by Laurent's half shade polarimeter-Babinet's compensator - idea of elliptical and circular polarization	Teaching Class	4	Yes	Group Discussion	1	Yes		86
МО	NTH: OC	TOBI	ER			<u>L </u>			.[VEAD	! : 2016-17
15	1 ST WEEK	2	Lasers: introduction,spontaneous emission, stimulated emission.						Yes	IEAR	. 2010-17
16	2 ND WEEK	3	Population Inversion, Laser principle- Einstein coefficients-Types of lasers-He-Ne laser, Ruby laser- Applications of lasers.	Teaching Class	1	Yes	 Ward Counseling, Class Room Seminars	1	Yes		
17	3 RD WEEK	3	Holography: Basic principle of holography- Gabor hologram and its limitations, Applications of holography.	Teaching Class UnitalV	2	Yes	 Ward Counseling, Quiz		Yes		
18	4 th WEEK	4	Fiber Optics Introduction- different types of fibers, rays and modes in an optical fiber, fiber material,principles of fiber communication (qualitative treatment only), advantages of fiber optic communication.	Teaching Class	4	Yes					
MON	TH: NOV	EMB	ER		11		 			VEAS	2016:-
19	l ND WEEK		PRACTICAL EXAMINATIONS							YEAR:	2016-17

20 W	2 nd VEEK	SEMESTER END EXAMINATIONS	
21 W	3 rd VEEK	SEMESTER END EXAMINATIONS	

1ch=1 SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

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Head Department of Physics

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PRINCIPAL, V.S.M. COLLEGE (A) RAMACHANDRAPURAM-538 255, (E.G.Dt.)

CURRICULUM PLAN - 2016 - 17

Department : Physics

CLASS: II B.Sc. (MPC and MPCS) SEMISTER-IV

PAPERIUThermodynamics & Radiation Physics

				Name of t	he Lecturer : N.SATISH M.	Sc.							
١.,	¥ «] = i		ADDITIONAL	CURRICULAR AC	CTVITY			CO-CUR	RICULAF	RACTIVI	TY	
SERIAL	MONTH	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATÉ DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MO	NTH: NO	VEM:	BER										: 2016-17
1	4 th WEEK	3	Introduction- Isothermal and adiabatic process- Reversible and irreversible processes-Carnnot's engine		Teaching Class	3	Yes						
МО	NTH:DEC	CEME	R									YEAR	2016-17
2	l ST WEEK	3	Carnnot's engine efficiency- Carnot's theorem-Second law of thermodynamics. Kelvin's and Claussius statements-Entropy		Teaching Class	3	Yes						
3	2 ND WEEK	44	physical significance –Change in entropy in reversible and irreversible processes-Entropy and disorder		Teaching Class	4	Yes		Ward Counseling,		Yes		
4	3 rd WEEK	4	Entropy (T-S) diagram and its uses Change of entropy of a perfect gas- change of entropy when ice changes		Teaching Class Unit II	2	Yes		Guest Lecture	1	Yes		
5	4th WEEK	2	Introduction –Deduction of Maxwell's law of distribution of molecular speeds, experimental verification		Teaching Class	2	Yes		Ward Counseling		Yes		

6	5 th WEEK		Transport phenomena – Mean free path - Viscosity of gases-thermal conductivity-diffusion of gases.		Teaching Class	2	Yes					
	MONTH	I:JAN	UARY								YEAR	: 2016-17
7	l ST WEEK	3	I MID Examinations	cy.	Teaching Class	2	Yes	Guest Lecture,	1	Yes		
8	2 ND WEEK		PONGAL HOLIDAYS							Yes		
9	3 RD WEEK	2	Thermodynamic potentials- Derivation of Maxwell's thermodynamic relations-Clausius- Clayperon's equation		Teaching Class	2	Yes	Study Projects		Yes		
10	4 TH WEEK	3	Derivation for ratio of specific heats-Derivation for difference of two specific heats for perfect gas	10 10 10 10 10 10	Teaching Class	3	Yes					
11	5 th WEEK	1	Joule Kelvin effect-expression for Joule Kelvin coefficient for perfect and vander Waal's gas		Teaching Class	1						
	монтн:	:FEBF	RUARY								YEAR	2016-17
12	l ST WEEK	2	Introduction-Joule Kelvin effect- Porous plug experiment - Joule expansion		Teaching Class	2	Yes					
13	2 ND WEEK	2	Distinction between adiabatic and Joule Thomson expansion- Expression for Joule Thomson cooling-Liquefaction of helium		Teaching Class	1	Yes	Quiz	1	Yes		
14	3 RD WEEK		Kapitza's method-Adiabatic demagnetization			3	Yes					

15	4 TH WEEK	2	II MID Examinations			2	Yes			·	
	MONTH	:MAR	CH			1				YEAR	2016-17
16	I ST WEEK	2	Production of low temperatures - applications of substances at lowtemperature-effects of chloro and fluoro carbons on ozone layer		Teaching Class	2	Yeş				Œ
17	2 ND WEEK	2	Blackbody-Ferry's black body- distribution of energy in the spectrum of black body-Wein's displacement law		Teaching Class	2	Yes	Group Discussion	Yes		
18	3 RD WEEK	3	Wein's law, Rayleigh-Jean's law- Quantum theory of radiation- Planck's law-Measurement of radiation-Types of pyrometers	*5	Teaching Class	3	Yes				
19	4 TH WEEK	4	Disappearing filament optical pyrometer-experimental determination — Angstrompyrheliometer-determination of solar constant, Temperature of Sun.		Teaching Class	4	Yes	Study Project	Yes		
	монтн	:APRI	L							YEAR	: 2016-17
20	l ST WEEK		SEMESTER END EXAMINATIONS								
21	2 ND WEEK		SEMESTER END EXAMINATIONS								
22	3 RD WEEK		SEMESTER END EXAMINATIONS								

22	4 TH	PRACTICAL EXAMINATIONS						
23	WEEK	PRACTICAL EXAMINATIONS		<u></u>	 	 		

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

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Head Department of Physics

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CURRICULUM PLAN - 2016 - 17

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

Department: Physics

PAPER: Waves & Oscillations

			Nan	ne of the Lectu	ırer : S.Sattibabu M.Sc,B.I	Ed							
_, 1	≃ a	<u>u</u>	ľ	ADDITIONAL	CURRICULAR A				CO-CUE	RICULA	R ACTIV		
SERIAL	MONTII WEEK	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED.	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE	REMARKS
_	MON	TH: N	OVEMBER				<u> </u>				1 - 0		1 R: 2016-17
1	4 th WEEK	3	Simple harmonic oscillator, and solution of the differential equation—Physical . characteristics of SHM		Teaching Class	3	Yes				Yes		(. 2010-17
	MONT	TH: DE	CEMBER									YEAR	L: 2016-17
2	l ST WEEK	5	torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g', combination of two mutually perpendicular simple harmonic vibrations of same frequency.		Teaching Class	5	Yes				Yes		
3	2 ND WEEK		Lissajous figures, Damped harmonic oscillator, solution of the differential equation of damped oscillator.		Teaching Class	4	Yes		Ward Counseling,		Yes		
4	3 rd WEEK		Energy considerations.Relaxation time quality factor		Teaching Class Unit V	3	Yes		Guest Lecture	1	Yes		
5	4th WEEK	2	differential equation of forced oscillator and its solution, logarithmic decrement.		Feaching Class	2	Yes		Ward Counseling		Yes		

Complex vibrations Fourier theorem 6 and evaluation of the Fourier Teaching Class WEEK Yes coefficients. **MONTH: JANUARY** YEAR: 2016-17 I MID Examinations WEEK 2^{ND} PONGAL HOLIDAYS WEEK Yes Analysis of periodic wave functionssquare wave, triangular Study Teaching Class WEEK 5 Yes wave.Longitudinal vibrations in bars. Yes **Projects** wave equation and its general solution. Special cases (i) bar fixed at both ends 4^{TH} 10 ii) bar fixed at the mid point iii) bar Teaching Class **WEEK** Yes free at both ends iv) bar fixed at one end. 5th Transverse wave propagation along a 11 Teaching Class WEEK 1 stretched string. MONTH: FEBRUARY YEAR: 2016-17. General solution of wave equation and 12 its significance. Teaching Class **WEEK** 3 Yes General solution of wave equation and 2^{ND} 13 its significance. Teaching Class WEEK 1 Yes Quiz Yes Modes of vibration of stretched string clamped at both ends, Overtones. 3^{RD} energy transport, transverse Teaching Class WEEK 5 Yes Yes 5 impedance.

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15	4 TH WEEK		II MID Examinations				Yes					
_	MONTE	ł:MA	RCH						<u></u>		<u> </u>	
16	l st WEEK	3	Ultrasonics Ultrasonics, properties of ultrasonic waves.	ž s.	Teaching Class	3	Yes			Yes	YEAR	R: 2016-17
17	2 ND WEEK	5	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.		Teaching Class	5	Yes		Group Discussion	Yes		
18	3 RD WEEK	3	Noise Pollution – origin, effect on the environment - prevention		Teaching Class	3	Yes					16
19	4 TH WEEK	4	REVISION		Teaching Class	4	Yes		Study Project	Yes		
	MONTH	APR	IL							 	VEAD.	2016-17
20	1 ST WEEK		SEMESTER END EXAMINATIONS								TEAR:	2010-17
21	2 ND WEEK		SEMESTER END EXAMINATIONS				_	7		_		
22	3 RD WEEK		SEMESTER END EXAMINATIONS									
23	4 TH WEEK		PRACTICAL EXAMINATIONS									

SIGNATURE OF THE DEPARTMENT I/C

MISE, M.Ph.L. Ph.D. Head-Department of Physics

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V.S.M.COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN - 2016 - 17</u>

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-I

Department : Physics

PAPER: I -Mechanics and Properties of Matter

			Name	of the Lecturer : S	S.Sattibabu M.Sc,B.E.	rit							
	≃ ∞	<u> </u>	1		CURRICULA		Y		CO-CURI	RICULAF	RACTIV	ITY	
SERIAL	MONTH	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MC	NTH: JU	LY					-	<u> </u>			1 8		: 2016-17
,	l ST WEEK	4	Scalar and vector fields, gradient of a scalar field and its physical significance. Divergence and curl of a vector field and related problems.		Teaching Class Assignment	3 1	Yes				Yes		
2	2 ND WEEK	3	Vector integration, line, surface and volume integrals. Stokes theorem.		Teaching Class	3	Yes		Ward Counseling		Yes		
3	3 RD WEEK	3	Gauss and Greens theorems- simple applications. Fundamentals of vibrations, Damped and forced oscillations		Teaching Class	3	Yes		Book Reviews		Yes		
4	4 TH WEEK	4	Motion of variable mass system, motion of a rocket, multi-stage rocket. Collisions in two and three dimensions.		Teaching Class	4	Yes		Ward Counseling		Yes		
5	5 th WEEK	3	concept of impact parameter scattering cross-section. Rutherford scattering.Definition of Rigid body, rotational kinematic relations		Teaching Class Unit I	2	Yes		Guest Lecture, Class Room Seminars	1	Yes		
MON	TH: AUC	GUST				<u> </u>						YEAR:	2016-17
6	l ST WEEK		I MID Examinations								Yes	- 40 110	2010-17

7	2 ND WEEK	3	Central forces – definition and examples, conservative nature of central forces,	Teaching Class	3	Yes	Ward Counseling		Yes	
8	3 RD WEEK	5	conservative force as a negative gradient of potential energy Equation of motion under a central force motion under inverse square law.	Teaching Class Unit II	4 1	Yes	Group Discussion	1	Yes	
9	4 TH WEEK	5	Derivation of Kepler's laws. Special theory of relativity	Teaching Class	5	Yes	Ward Counseling		Yes	
MO.	NTH: SEI	TEN	IBER					<u> </u>		YEAR: 2016-
10	I ST WEEK	5	Galilean relativity, absolute frames, Michelson-Morley experiment	Teaching Class Assignment	4 1	Yes	Study Projects		Yes	
11	2 ND WEEK	3	Postulates of special theory of relativity.	Teaching Class	3	Yes	Ward Counseling, Book Reviews	1	Yes	
12	3 RD WEEK		II MID Examinations						Yes	
13	4 TH WEEK	3	Lorentz transformation.time dilation, length contraction,	Teaching Class	3	Yes	Ward Counseling Seminars		Yes	
14	5 th WEEK	2	mass-energy relation. Equation of motion for a rotating body,	Teaching Class	2	Yes	Group Discussion	1	Yes	
ION	тн: ост	OBE	R							YEAR: 2016-1
15	l ST WEEK	5	angular momentum and inertial tensor. Eulers equation, precession of a top, Gyroscope.	Teaching Class	5	Yes	Ward Counseling Seminars		Yes	1 EAR. 2010-1

16	2 ND WEEK	2	Mechanics of continuous media and Central Forces Classification of beams, types of bending, point load, distributed load	Teaching Class	2	Yes	Ward Counseling, Class Room Seminars	1	Yes		
17	3 RD WEEK	3	shearing force and bending moment. sign conventions simple supported beam carrying a concentrated load at mid span, cantilever with an end load.	Teaching Class Unit IV	2	Yes	Ward Counseling, Quiz		Yes		
18	5 th WEEK	4	REVISION		4	Yes			Yes		
MON	TH: NO	VEMB	ER							YEAR	: 2016-17
19	l ND WEEK		PRACTICAL EXAMINATIONS							7	
20	2 RD WEEK		SEMESTER END EXAMINATIONS								
21	3 th WEEK		SEMESTER END EXAMINATIONS								

SIGNATURE OF THE DEPARTMENT I/C

Dr. R. Srinivasa Rao Msb. M.Ph. Pr.D.
Head Department of Physics
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V.S.M.COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN - 2016 - 17</u>

Department : Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-I

PAPER: I -Mechanics and Properties of Matter

			Name of the	Lecturer : R.Nage	eswara rao M.Sc(Tech).B.Ed			<u> </u>				
1.	∞ ⊲	 	1		CURRICULA				CO-CURI	RICULAI	ACTIV	ITY	
SERIAL	MONTH	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MO	NTH: JU	LY					-	_ `-			1-		: 2016-17
1	l st WEEK	4	Scalar and vector fields, gradient of a scalar field and its physical significance. Divergence and curl of a vector field and related problems.		Teaching Class Assignment	3 1	Yes				Yes		
2	2 ND WEEK	3	Vector integration, line, surface and volume integrals. Stokes theorem.		Teaching Class	3	Yes		Ward Counseling		Yes		
3	3 RD WEEK	3	Gauss and Greens theorems- simple applications. Fundamentals of vibrations, Damped and forced oscillations		Teaching Class	3	Yes		Book Reviews		Yes		
4	4 TH WEEK	4	Motion of variable mass system, motion of a rocket, multi-stage rocket. Collisions in two and three dimensions.		Teaching Class	4	Yes		Ward Counseling		Yes		
5	5 th WEEK	3	concept of impact parameter scattering cross-section. Rutherford scattering.Definition of Rigid body, rotational kinematic relations		Teaching Class Unit I	2	Yes		Guest Lecture, Class Room Seminars	1	Yes		
MON	TH: AUG	UST										YEAR:	2016-17
6	I ST WEEK		MID Examinations								Yes		

		$\overline{}$										
7	2 ND WEEK	3	Central forces – definition and examples, conservative nature of central forces,	14	Teaching Class	3	Yes	Ward Counseling		Yes		
8	3 RD WEEK	5	conservative force as a negative gradient of potential energy Equation of motion under a central force motion under inverse square law.	ū	Teaching Class Unit II	4 1	Yes	Group Discussion	1	Yes		
9	4 TH WEEK	5	Derivation of Kepler's laws. Special theory of relativity		Teaching Class	5	Yes	Ward Counseling		Yes		
MO	NTH: SEP	ТЕМ	BER								YEAR;	2016-1
10	I ST WEEK	5	Galilean relativity, absolute frames, Michelson-Morley experiment		Teaching Class Assignment	4 1	Yes	Study Projects		Yes		2010-1
11	2 ND WEEK	3	Postulates of special theory of relativity.		Teaching Class	3	Yes	Ward Counseling, Book Reviews	1	Yes		
12	3 RD WEEK		II MID Examinations							Yes		
13	4 TH WEEK	3	Lorentz transformation.time dilation, length contraction,	7	Teaching Class	3	Yes	Ward Counseling Seminars		Yes		
14	5 th WEEK	2	mass-energy relation. Equation of motion for a rotating body,	T	eaching Class	2	Yes	Group Discussion	1	Yes		
ION'	гн: ост	OBEF	l .								YEAR: 2	016 17
15	I ST WEEK	5 1	angular momentum and inertial tensor. Eulers equation, precession of a top, Gyroscope.	Т	eaching Class	5	Yes	Ward Counseling Seminars		Yes .	EAR: 2	.010-1/

the

16	2 ND WEEK	2	Mechanics of continuous media and Central Forces Classification of beams, types of bending, point load, distributed load	Teaching Class	2	Yes	Ward Counseling, Class Room Seminars	Yes		
17	3 RD WEEK	3	shearing force and bending moment. sign conventions simple supported beam carrying a concentrated load at mid span, cantilever with an end load.	Teaching Class Unit IV	2	Yes	Ward Counseling, Quiz	Yes		83
18	5 th WEEK	4	REVISION		4	Yes		Yes		
MOI	NTH: NO	VEMB	ER						VEAD	: 2016-17
19	1 ND WEEK	ï	PRACTICAL EXAMINATIONS						TEAN	. 2010-17
20	2 RD WEEK		SEMESTER END EXAMINATIONS							
21	3 th WEEK		SEMESTER END EXAMINATIONS							

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SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao M.St., M.Phil., Ph.D. Head Department of Physics

V.S.M. College - Ramachandrapuram East Godavan Dt (A.P.) 533 255

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PRINCIPAL, V.S.M. COLLEGE (A.). BARACHANDRAPURAM-538 255, (E.G.Dt.)

CURRICULUM PLAN - 2016 - 17

Department: Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

PAPER: Waves & Oscillations Name of the Lecturer: R.Nageswara rao M.Sc(Tech), B.Ed HOURS AVAILABLE SERIAL NUMBER **CURRICULAR ACTVITY** ADDITIONAL CO-CURRICULAR ACTIVITY SYLLABUS TOPICS INPUTS / WHETHER IF NOT, ALTERNATE DATE ACTIVITY HOURS ALLOTTED WHETHER CONDUCTED IF NOT, ALTERNATE DATE REMARKS HOURS ALLOTTED VALUES ACTIVITY ADDITION MONTH: NOVEMBER Simple harmonic oscillator, and YEAR: 2016-17 4^{1h} solution of the differential equation-Physical . characteristics of SHM WEEK **Teaching Class** 3 Yes Yes MONTH: DECEMBER torsion pendulum, measurements of YEAR: 2016-17 rigidity modulus, compound pendulum, measurement of 'g', 2 combination of two mutually WEEK Teaching Class Yes perpendicular simple harmonic Yes vibrations of same frequency. Lissajous figures, Damped harmonic 2^{ND} 3 oscillator, solution of the differential WEEK equation of damped oscillator. Teaching Class Ward 4 Yes Yes Counseling, Energy considerations.Relaxation time 3^{rd} quality factor WEEK 3 Teaching Class Unit V Guest Yes Yes Lecture differential equation of forced 4th 5 oscillator and its solution. logarithmic WEEK Teaching Class decrement. Ward 2 Yes Yes Counseling

6	5 th WEEK	4	Complex vibrations Fourier theorem and evaluation of the Fourier coefficients.	Teaching Class		4	Yes		$\overline{}$	1	T	\top	
	MONT	H:JA	ANUARY										l
7	VEEK		I MID Examinations		\neg	\neg	$\overline{}$		<u> </u>	$\overline{}$		YEAR:	2016
8	2 ND WEEK		PONGAL HOLIDAYS		<i>[6</i>	+	+		+	+	\dashv		
9	3 RD WEEK	5	Analysis of periodic wave functions- square wave, triangular wave.Longitudinal vibrations in bars.	Teaching Class	5	5 ,	Yes	Study		-	Yes Yes	-	
10	4 TH WEEK	4	wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar fixed at one end.	Teaching Class	4	Y	'es	Projects	-	-	75	+	
	5 th WEEK		Transverse wave propagation along a stretched string.	Teaching Class	1	+	+	-	+	+	+	+	
N	MONTH:				'								
12	1 ST	7	General solution of wave equation and										
-\\\	2ND	[its significance. General solution of wave equation and	Teaching Class	3	Yes	5		T	T	YE	EAR: 201	16-17
	WEEK 2	- 1	- vigillicance,	Teaching Class	1	Yes	+	+	-	┼	 		
4 1	3 RD /EEK 5	er	dodes of vibration of stretched string lamped at both ends, Overtones, nergy transport, transverse apedance.	Teaching Class	1-1	Yes	-	Quiz	5	Yes	_	+	

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15	4 TH WEEK		II MID Examinations			Yes					
	MONTH	I:MAI	RCH				 			YEAR	: 2016-17
16	l ST WEEK	3	Ultrasonics Ultrasonics, properties of ultrasonic waves.	Teaching Class	3	Yes			Yes		
17	2 ND WEEK	5	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.	Teaching Class	5	Yes	Group Discussion		Yes		
18	3 RD WEEK	3	Noise Pollution – origin, effect on the environment - prevention	Teaching Class	3	Yes					
19	4 TH WEEK	4	REVISION	Teaching Class	4	Yes	Study Project		Yes		
	MONTH	: APF	RIL							YEAR	: 2016-17
20	1 ST WEEK		SEMESTER END EXAMINATIONS								
21	2 ND WEEK		SEMESTER END EXAMINATIONS				 				āji
22	3 RD WEEK		SEMESTER END EXAMINATIONS								
23	4 TH WEEK		PRACTICAL EXAMINATIONS		:			:			

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Dr. K. Srinivasa Rao

MSt. MPNL PLO.

Head Department of Physics

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SIGNATURE OF THE PRINCIPAL PRINCIPAL, V.S.M. COLLEGE (
RAMACHANDRAPURAM-539 255, (E.G.Dt.)

CURRICULUM PLAN - 2016 - 17

Department: Physics

CLASS: II B.Sc. (MPC and MPCS) SEMISTER-IV

PAPERI¥ Thermodynamics & Radiation Physics

			Nan	ne of the Lectu	rer : P.Saibabu M.Sc.(Tec	h)	-					<u>-</u>	
	. 8	61	-	ADDITIONAL	CURRICULAR A				CO-CUR	RICULAI	R ACTIV	ITY	
SERIAL	MONTIL	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MO	NTH: NO	VEM	BER					<u>' </u>		1			: 2016-17
1	4 th WEEK	3	Introduction- Isothermal and adiabatic process- Reversible and irreversible processes-Carnnot's engine		Teaching Class	3	Yes						
MOI	NTH:DEC	СЕМЕ	R								<u> </u>	YEAR	2016-17
2	l ST WEEK	4	Carnnot's engine efficiency- Carnot's theorem-Second law of thermodynamics. Kelvin's and Claussius statements-Entropy		Teaching Class	4	Yes						
3	2 ND WEEK	3	physical significance –Change in entropy in reversible and irreversible processes-Entropy and disorder		Teaching Class	3	Yes		Ward Counseling,		Yes		
4	3 rd WEEK		Entropy (T-S) diagram and its uses Change of entropy of a perfect gas- change of entropy when ice changes		Teaching Class Unit II	2	Yes		Guest Lecture	1	Yes		
5	4th WEEK	- 4	Introduction –Deduction of Maxwell's law of distribution of molecular speeds, experimental verification		Teaching Class	2	Yes		Ward Counseling		Yes		

6	5 th WEEK	2	Transport phenomena – Mean free path - Viscosity of gases-therma conductivity-diffusion of gases.	Teaching Class	2	Yes					
	MONTH	1:JAN	UARY		_		 -			YEAR	: 2016-17
7	I ST WEEK	3	I MID Examinations	Teaching Class	2	Yes	Guest Lecture,	1	Yes	·	
8	2 ND WEEK		PONGAL HOLIDAYS						Yes		
9	3 RD WEEK	2	Thermodynamic potentials- Derivation of Maxwell's thermodynamic relations-Clausius- Clayperon's equation	Teaching Class	2	Yes	Study Projects		Yes		
10	4 TH WEEK	3	Derivation for ratio of specific heats-Derivation for difference of two specific heats for perfect gas	Teaching Class	3	Yes					
11	5 th WEEK	1	Joule Kelvin effect-expression for Joule Kelvin coefficient for perfect and vander Waal's gas	Teaching Class	1						
	MONTH:	FEBF	RUARY							YEAR:	2016-17
12	1 ST WEEK	2	Introduction-Joule Kelvin effect- Porous plug experiment - Joule expansion	Teaching Class	2	Yes					
13	2 ND WEEK	2	Distinction between adiabatic and Joule Thomson expansion- Expression for Joule Thomson cooling-Liquefaction of helium	Teaching Class	1	Yes	Quiz	1	Yes		
14	3 RD WEEK		Kapitza's method-Adiabatic demagnetization		3	Yes					

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15	4 TH WEEK	2	II MID Examinations		2	Yes				
	MONTH	:MAR	CH				 l		YEAR	: 2016-17
16	l ST WEEK	2	Production of low temperatures - applications of substances at lowtemperature-effects of chloro and fluoro carbons on ozone layer	Teaching Class	2	Yes				
17	2 ND WEEK	2	Blackbody-Ferry's black body- distribution of energy in the spectrum of black body-Wein's displacement law	Teaching Class	2	Yes	Group Discussion	Yes		
18	3 RD WEEK	3	Wein's law, Rayleigh-Jean's law- Quantum theory of radiation- Planck's law-Measurement of radiation-Types of pyrometers	Teaching Class	3	Yes				
19	4 TH WEEK	4	Disappearing filament optical pyrometer-experimental determination — Angstrompyrheliometer-determination of solar constant, Temperature of Sun.	Teaching Class	4	Yes	Study Project	Yes		
	монтн:	APRI	L						YEAR	: 2016-17
20	l ST WEEK		SEMESTER END EXAMINATIONS							
21	2 ND WEEK		SEMESTER END EXAMINATIONS							
22	3 RD WEEK		SEMESTER END EXAMINATIONS			!				

23	4 TH WEEK	PRACTICAL EXAMINATIONS					

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

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CURRICULUM PLAN - 2016 - 17

LASS: II B.Sc. (MPC and MPCS) SEMISTER-II

SEMESTER: III - Wave Optics

Name of the Lecturer P.Saibabu M.Sc.(Tech)

	7			The state of the Beeta	rer P.Saidadu M.Sc.(Tec	,							
1	No.	l ri			CURRICULAR	ACTVIT	Y		CO-CURR	ICULAR	ACTIVI	TY	
SERIAL	MONTH WEEK	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED.	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MO	NTH: JUI	LY										YEAR	2016-17
1	1 ST WEEK	3	Introduction – monochromatic aberrations, spherical aberration.		Teaching Class Assignment	2	Yes				Yes		
2	2 ND WEEK	-	methods of minimizing spherical aberration, coma, astigmatism and curvature of field, distortion.		Teaching Class	3	Yes		Ward Counseling		Yes		
3	3 RD WEEK		Chromatic aberration-the achromatic doublet. Achromatism for two lenses (i) in contact and (ii) separated by a distance.		2	YEAR : 2016- 17	Yes		Book Reviews		Yes		:
4	4 TH WEEK	4	Principle of superposition – coherence- temporal coherence and spatial coherence- conditions for interference of light.		Teaching Class	3	Yes		Ward Counseling		Yes		
5	5 th WEEK	2	Fresnel's biprism-determination of wavelength of light –change of phase on reflection.		Teaching Class Unit II	1	Yes		Guest Lecture, Class Room Seminars	1	Yes		

MONTH: AUGUST

Department: Physics

YEAR: 2016-17

6	l ST WEEK		I MID Examinations						Yes		
7	2 ND WEEK	3	Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (cosine law) –colors of thin films-Interference by a film with two non-parallel reflecting surfaces (Wedge shaped film).	Teaching Class	3	Yes	Ward Counseling		Yes	2.0	
8	3 RD WEEK	3	Determination of diameter of wire, Newton's rings in reflected light. Michelson interferometer, Determination of wavelength of monochromatic light using Newton's rings and Michelson Interferometer.	Teaching Class Unit III	2	Yes	Group Discussion	1	Yes		
9	4 TH WEEK	4	Introduction, distinction between Fresnel and Fraunhoffer diffraction, Fraunhoffer diffraction Diffraction due to single slit-Fraunhoffer diffraction due to double slit-Fraunhoffer diffraction pattern with N slits (diffraction grating). Resolving power of grating	Teaching Class	4	Yes	Ward Counseling		Yes		
MON	TH: SEP	TEM	BER							YEAR	: 2016-17
10	l ST WEEK		Determination of wavelength of light in normal incidence and minimum deviation methods using diffraction grating	Teaching Class Assignment	2	Yes	Study Projects		Yes		
11	2 ND WEEK	3	Fresnel's half period zones-area of the half period zones-zone plate-comparison of zone plate with convex lens-difference between interference and diffraction.	Teaching Class	3	Yes	Ward Counseling, Book Reviews	1	Yes		

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12	3 RD WEEK		II MID Examinations			:	1				
13	4 TH WEEK	4	Polarized light: methods of polarization polarization by reflection, refraction, double refraction, scattering of light-Brewster's law-Mauls law-Nicol prism polarizer and analyzer	Teaching Class Unit IV	2 1	Yes	QUIZ	1	Yes		
14	5 th WEEK		Quarter wave plate, Half wave plate-optical activity, determination of specific rotation by Laurent's half shade polarimeter-Babinet's compensator - idea of elliptical and circular polarization	Teaching Class	3	Yes	Group Discussion	1	Yes		
MON	NTH: OC	ГОВЕ	R							YEAR	: 2016-17
15	1 ST WEEK	2	Lasers: introduction,spontaneous emission, stimulated emission.						Yes		
16	2 ND WEEK	3	Population Inversion, Laser principle- Einstein coefficients-Types of lasers-He-Ne laser, Ruby laser- Applications of lasers.	Teaching Class	1	Yes	Ward Counseling, Class Room Seminars	1	Yes		
17	3 RD WEEK	3	Holography: Basic principle of holography- Gabor hologram and its limitations, Applications of holography.	Teaching Class Unit V	2 1	Yes	Ward Counseling, Quiz		Yes		
18	4 th WEEK	4	Fiber Optics Introduction- different types of fibers, rays and modes in an optical fiber, fiber material,principles of fiber communication (qualitative treatment only), advantages of fiber optic communication.	Teaching Class	4	Yes					t: 2016-17

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19	1 ND WEEK	PRACTICAL EXAMINATIONS					
20	2 nd WEEK	SEMESTER END EXAMINATIONS					
. 21	3 rd WEEK	 SEMESTER END EXAMINATIONS					

SIGNATURE OF THE DEPARTMENT I/C

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<u>V.S.M.COLLEGE</u>: RAMACHANDRAPURAM

CURRICULUM PLAN - 2016 - 17

Department : Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-I

PAPER: I -Mechanics and Properties of Matter

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	三翼	URS	CVILLADUS	ADDITIONAL INPUTS					CO-CUR	RICULA			S
SERIAL	2	HOURS	SYLLABUS TOPICS	/ VALUES ADDITION	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
10	NTH: JU	LY				 				-	- 8	YEAR:	2016
1	I ST WEEK	2	Scalar and vector fields, gradient of a scalar field and its physical significance.		Teaching Class Assignment	1 1	Yes				Yes	TEAR	2010-
2	2 ND WEEK	4	Divergence and curl of a vector field and related problems, Vector integration, line, surface and volume integrals. Stokes theorem.		Teaching Class	4	Yes		Ward Counseling		Yes		
3	3 RD WEEK	5	Gauss and Greens theorems- simple applications. Fundamentals of vibrations, Damped and forced oscillations		Teaching Class	5	Yes		Book Reviews		Yes		
	4 TH WEEK	5	Motion of variable mass system, motion of a rocket, multi-stage rocket. Collisions in two and three dimensions.		Feaching Class	5	Yes		Ward Counseling		Yes		
	5 th WEEK	4	concept of impact parameter scattering cross-section. Rutherford scattering.Definition of Rigid body, rotational kinematic relations		Teaching Class Unit I	3 1	Yes		Guest Lecture, Class Room Seminars	1 1	Yes		
rn(H: AUG	UST								_		VE (D =	
	IST	l ₁	MID Examinations		10				 -			YEAR: 2	U16-17
ļ	I ST	ļ	MID Examinations		10						Yes	LAK.	_

7	2 ND WEEK	4	Central forces – definition and examples, conservative nature of central forces,	Teaching Class	4	Yes	Ward Counse			Yes		
8	3 RD WEEK	5	conservative force as a negative gradient of potential energy Equation of motion under a central force motion under inverse square law.	Teaching Class Unit II	4 1	Yes	Group Discuss		1	Yes		20
9	4 TH WEEK	4	Derivation of Kepler's laws. Special theory of relativity	Teaching Class	4	Yes	Ward Counseli	ng		Yes		
MO	NTH: SE	PTEN	1BER								YEAR	: 2016-17
10	l ST WEEK	5	Galilean relativity, absolute frames, Michelson-Morley experiment	Teaching Class Assignment	4 1	Yes	Study Project:			Yes		
11	2 ND WEEK	3	Postulates of special theory of relativity.	Teaching Class	3	Yes	Ward Counselin Book Reviews		1	Yes		
12	3 RD WEEK		II MID Examinations							Yes		
13	4 TH WEEK	3	Lorentz transformation.time dilation, length contraction,	Teaching Class	3	Yes	Ward Counselin Seminars			Yes		
14	5 th WEEK	3	mass-energy relation.Equation of motion for a rotating body,	Teaching Class	3	Yes	Group Discussio		1	Yes		
MON	TH: OCT	OBE	R								YEAR.	2016-17
15	l ST WEEK	5	angular momentum and inertial tensor. Eulers equation, precession of a top, Gyroscope.	Teaching Class	5	Yes	Ward Counseling Seminars)	,	Yes	- 20. 64.0	

16	2 ND WEEK	4	Mechanics of continuous media and Central Forces Classification of beams, types of bending, point load, distributed load	Tead	ching Class	4	Yes	Ward Counseling, Class Room Seminars	1	Yes		
17	3 RD WEEK	5	shearing force and bending moment. sign conventions simple supported beam carrying a concentrated load at mid span, cantilever with an end load.	Tead Unit	ching Class	4	Yes	Ward Counseling, Quiz		Yes		
18	5 th WEEK	4	REVISION			4	Yes			Yes		
MON	YON :HTM	/EMB	ER								VEAD	2016-17
19	I ND WEEK		PRACTICAL EXAMINATIONS								ILAK	2010-17
20	2 RD WEEK		SEMESTER END EXAMINATIONS									
21	3 th WEEK		SEMESTER END EXAMINATIONS									

SIGNATURE OF THE DEPARTMENT I/C

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Dr. K. Srinivasa Naco MSE, MPhil, Ph.D. Head Department of Physics V.S.M. College - Ramachandrapurem East Godavan Dt (A.P.) 533 255 S. Company SIGNATURE OF THE PRINCIPAL

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CURRICULUM PLAN - 2016 - 17

Department: Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

PAPERII: Waves & Oscillations

	Name of the Lecturer : CH. Satyanarayana M.Sc													
	w			ADDITIONAL	CURRICULAR A				CO-CUR	Yes				
SERIAL	MONTH WEEK	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS	
	MON	ΓH: NO	OVEMBER					1370				t: 2016-17		
<u>1</u>	4 th WEEK	3	Simple harmonic oscillator, and solution of the differential equation-Physical . characteristics of SHM		Teaching Class	3	Yes				Yes			
	MONTH: DECEMBER YEAR: 2016-17													
2	1 ST WEEK	5	torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g', combination of two mutually perpendicular simple harmonic vibrations of same frequency.		Teaching Class	5	Yes				Yes			
3	2 ND WEEK		Lissajous figures, Damped harmonic oscillator, solution of the differential equation of damped oscillator.		Teaching Class	4	Yes		Ward Counseling,		Yes			
4	3 rd WEEK	4	Energy considerations.Relaxation time quality factor		Teaching Class Unit V	3	Yes		Guest Lecture	1	Yes			
5	4th WEEK	2	differential equation of forced oscillator and its solution. logarithmic decrement.		Teaching Class	2	Yes		Ward Counseling		Yes			

Complex vibrations Fourier theorem 5th and evaluation of the Fourier **Teaching Class** 4 Yes **WEEK** coefficients. **MONTH: JANUARY** YEAR: 2016-17 I MID Examinations **WEEK** 2^{ND} PONGAL HOLIDAYS WEEK Yes Analysis of periodic wave functions- 3^{RD} square wave, triangular Study Teaching Class 5 Yes Yes **WEEK** wave.Longitudinal vibrations in bars. **Projects** wave equation and its general solution. Special cases (i) bar fixed at both ends 4TH ii) bar fixed at the mid point iii) bar 10 Teaching Class 4 Yes WEEK free at both ends iv) bar fixed at one lend. Transverse wave propagation along a 11 Teaching Class WEEK stretched string. MONTH: FEBRUARY YEAR: 2016-17 General solution of wave equation and 12 its significance. 3 **Teaching Class** 3 Yes WEEK General solution of wave equation and 2^{ND} 13 its significance. Teaching Class WEEK Yes Quiz Yes Modes of vibration of stretched string 3RD clamped at both ends, Overtones, energy transport, transverse Teaching Class WEEK Yes 5 Yes impedance.

												
4 TH WEEK		II MID Examinations				Yes						
MONTI	I:MA	RCH					L		J		YEAR	2: 2016-17
1 ST WEEK	3	Ultrasonics Ultrasonics, properties of ultrasonic waves.	×	Teaching Class	3	Yes	.*	-"		Yes		
2 ND WEEK	5	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.		Teaching Class	5	Yes		Group Discussion		Yes		
3 RD WEEK	3	Noise Pollution – origin, effect on the environment - prevention		Teaching Class	3	Yes						
4 TH WEEK	4	REVISION		Teaching Class	4	Yes		Study Project		Yes		
MONTH	: APR	RIL									YEAR	2016-17
I ST WEEK		SEMESTER END EXAMINATIONS										
2 ND WEEK		SEMESTER END EXAMINATIONS						-				
3 RD WEEK		SEMESTER END EXAMINATIONS										
4 TH WEEK		PRACTICAL EXAMINATIONS		47c								
	WEEK MONTH IST WEEK 2ND WEEK 3RD WEEK 4TH WEEK MONTH IST WEEK 2ND WEEK 4TH WEEK 4TH WEEK 4TH WEEK 4TH WEEK 4TH WEEK	WEEK MONTH:MA IST WEEK 3 2ND WEEK 3 4TH WEEK MONTH: APR IST WEEK 2ND WEEK 3RD WEEK 4TH WEEK 4TH	MONTH: MARCH 1ST	MONTH:MARCH 1ST WEEK 3 Ultrasonics Ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonic waves. 3RD WEEK 3 Noise Pollution – origin, effect on the environment – prevention 4TH WEEK 4 REVISION MONTH: APRIL 1ST SEMESTER END EXAMINATIONS 2ND SEMESTER END EXAMINATIONS 3RD SEMESTER END EXAMINATIONS 3RD SEMESTER END EXAMINATIONS 3RD SEMESTER END EXAMINATIONS 4TH EXAMINATIONS 3RD SEMESTER END EXAMINATIONS	MONTH:MARCH Ultrasonics Ultrasonic U	MONTH:MARCH 1ST WEEK Ultrasonics Eaching Class 5	MONTH:MARCH 1ST WEEK 3 Ultrasonics Ultrasonic waves. Teaching Class 3 Yes 2ND Production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonic waves. 3RD WEEK 3 Noise Pollution – origin, effect on the environment – prevention Teaching Class 3 Yes 4TH WEEK 4 REVISION Teaching Class 4 Yes MONTH: APRIL 1ST SEMESTER END EXAMINATIONS 2ND SEMESTER END EXAMINATIONS 3RD WEEK EXAMINATIONS 3RD SEMESTER END EXAMINATIONS 3RD WEEK EXAMINATIONS 3RD SEMESTER END EXAMINATIONS 4TH PRACTICAL EXAMINATIONS	WEEK IMID Examinations Yes MONTH:MARCH 1ST WEEK 3 Ultrasonics, properties of ultrasonic waves. 2ND Production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonic waves. 3RD WEEK 3 Noise Pollution – origin, effect on the environment – prevention 4TH WEEK 4 REVISION Teaching Class 3 Yes MONTH: APRIL 1ST SEMESTER END EXAMINATIONS 2ND SEMESTER END EXAMINATIONS 3RD WEEK EXAMINATIONS 3RD EXAMINATIONS 3RD WEEK EXAMINATIONS 3RD EXAMINATIONS 3RD EXAMINATIONS 3RD EXAMINATIONS 3RD EXAMINATIONS 3RD EXAMINATIONS 4TH PRACTICAL EXAMINATIONS	WEEK II MID Examinations Yes	WEEK IT MID Examinations Yes	WEEK IT MID Examinations Yes MONTH:MARCH 1ST WEEK 3 Ultrasonics Ultrasonics Ultrasonics Waves. Teaching Class 3 Yes Yes 2ND	WEEK IMID Examinations Yes Yes

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V.S.M. College - Ramachandrapuram

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FAMACHANDRAPURAM-538 255, (E.G.DL.)

CURRICULUM PLAN 2015-16

Department: Physics

PAPER: III - Electricity, Magnetism and Electronics

CLASS: III B.Sc. (MPC)

Name of the Lecturer : Dr. K. Srinivasa Rao, M.Sc., M.Phil., Ph.D

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SERIAL	MONTII	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	АСТІVІТУ	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
МО	NTH: JUI	NE				-				•		YEAR	: 2015-16
1	3 RD WEEK	2	Remedial Coaching	1	Teaching Class	2	Yes						
2	4 TH WEEK	3	Remedial Coaching		Teaching Class	3	Yes						
MOI	NTH: JUI	Y					•					YEAR	: 2015-16
3	1 ST WEEK	4	Introduction to static electricity Gauss law statement, proof E due to Uniformly charged sphere.	Electrification	Teaching Class	3	Yes						
4	2 ND WEEK	3	charged cylindrical conductor and an infinite conducting sheet of charge.Deduction of Coulmb's law from Gauss law	Bad conductor	Teaching Class	3	Yes		Ward Counseling		Yes		
5	3 RD WEEK	4	Electric potential – Potential due to a charged spherical conductor. Electric field strength from the electric dipole and an infinite line of charge.	Related problems	Teaching Class Unit I	3	Yes		Book Reviews		Yes		
6	4 TH WEEK	3	Electric field strength from the electric dipole and an infinite line of charge. Potential of a uniformly charged circular disc and problems. An atomic view – Polar and non-polar dielectrics in electric field	Freq. variations	Teaching Class Assignment	2	Yes		Ward Counseling		Yes		

An atomic view - Polar and non-polar 5TH 2 Yes Teaching Class dielectrics in electric field- potential energy of WEEK a dipole in an electric field. YEAR: 2015-16 MONTH: AUGUST Polarization and charge density Dielectrics and 1ST Gauss law - relation between D,E, and P Teaching Class 2 Yes Assignment vectors, Dielectric constant and susceptibility -WEEK boundary conditions at the dielectric surface. Capacity- working principle, Capacity of a concentric spheres and cylindrical condenser -Ward 2^{ND} Yes **Teaching Class** 2 Yes **Applications** Counseling capacity of a parallel plate condenser with and **WEEK** without dielectric. Force between plates of condenser - attracted disc electrometer construction and working, **Teaching Class** Group 3^{RD} Yes Yes Discussion 10 Unit II measurement of dielectric constant and WEEK potential difference, and problems. Magnetic shell - potential due to magnetic shell field due to magnetic shell – equivalent of electric circuit and magnetic shell. Application X- ray production Teaching Class Ward 4^{TH} Yes lYes Counseling of field due to magnetic shell - magnetic **WEEK** induction (B) - Permeability and susceptibility Relation among B,H and I. Hysteresis loop. **YEAR: 2015-16 MONTH: SEPTEMBER** |Hall effect - cyclotron - synchrocyclotron and synchrotron - force on a current carrying Study Teaching Class 3 1ST Yes 1 Yes 12 **Projects** Assignment conductor placed in a magnetic field, force and **WEEK** torque on a current loop,

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13	2 ND WEEK	2	Biot -Savart's law and calculation of B due to long straight wire, a circular current loop and solenoid and problems.		Teaching Class	2	Yes	Ward Counseling, Book Reviews		Yes		
14	3 RD WEEK	3	induced emf – time varying magnetic fields,Betatron,Ballistic galvanometer,self and mutual inductance.		Teaching Class Unit III	1	Yes	QUIZ	1	Yes		
15	4 TH WEEK	3	Coefficient of coupling, calculation of self inductance of a long solenoid – toroid – energy stored in magnetic field – transformer – Construction, working, energy losses and efficiency and problems.		Teaching Class Unit Test - 2 Practical	2	Yes	Ward Counseling Seminars	1	Yes		
16	5TH WEEK	2	Growth and decay of currents in LR, CR circuits.		Teaching Class	1	Yes	Group Discussion	1	Yes		
MON	TH: OC	ГОВЕ	R					 	<u> </u>		YEAR	2015-16
17	Ind WEEK	1	LCR circuits – Critical damping.	1	Teaching Class Assignment	1	Yes		<u>.</u>			
18	2nd WEEK	3	Alternating current relation between current and voltage in pure R,C and L-vector diagrams – Power in ac circuits. LCR series and parallel resonant circuit – Q-factor.	Tuned circuits in radio and T.V,	Teaching Class	2	Yes	Ward Counseling, Class Room Seminars	1	Yes		
19	этн WEEK	3	AC & DC motors-single phase, three phase. Magnetic Equations and electromagnetic waves: A review of basic laws of electricity and magnetism, Displacement current	Battery eliminators and adopters	Teaching Class MID Exam I	3	Yes	Ward Counseling	l	Yes		

20	5 th WEEK	3	Maxwell's equations in differential form – Maxwell's wave equation		Teaching Class	3	Yes					
MON	NTH: NO	VEME	BER					 			YEAR:	2015-16
21	l ST WEEK	4	plane electromagnetic waves, Transverse nature of electromagnetic waves Poynting vector – production of electromagnetic waves (Hertz's experiment)Formation of electron energy bands in solids, classification of solids in terms of forbidden energy gap. Intrinsic and extrinsic semiconductors, Fermi level,		Teaching Class	4	Yes	Guest Lecture,Class Room Seminars	55	Yes		
22	2 ND WEEK	3	continuity equationIntrinsic and extrinsic semiconductors, Fermi level, continuity equation. p-n junction diode, Zener diode characteristicsTransistor as an amplifier concept of negative feed back and positive feed back – Barkhausen criterion.	MOSFET IC fabrication principle	Teaching Class	2	Yes	Ward Counseling, Quiz	1	Yes		
23	3 RD WEEK		HALF-YEARLY EXAMINATIONS - 2015							Yes		
24	4th WEEK		HALF-YEARLY EXAMINATIONS - 2015							Yes		
MON	TH: DEC	CEME	BER							_	YEAR	: 2015-16
25	1 ST WEEK	3	zener diode voltage regulator. Half wave and full wave rectifiers and filters, ripple factor (quantitative)		Teaching Class	2	Yes	Ward Counseling Seminars	1	Yes		

26	2 ND WEEK	3	p n p and n p n transistors, current components in transistors, CB,CE and CC configurations –		Teaching Class	2	Yes	Ward Counseling, Study Projects	1	Yes		
27	3 rd WEEK		transistor hybrid parameters – determination of hybrid parameters from transistor characteristics	Applications to computers	Teaching Class Unit V	2	Yes	Guest Lecture		Yes		
28	4 TH WEEK	2	Transistor as an amplifier — concept of negative feed back and positive feed back — Barkhausen criterion,		Teaching Class	2	Yes	Ward Counseling		Yes		
29	5TH WEEK	3	RC coupled amplifier and phase shift oscillator (qualitative) Binary number system, converting Binary to Decimal and vice versa.		Teaching Class	2	Yes	Quiz	1	Yes		_
MON	TH: JAN	WAR'	Y				1	 			YEAR:	2015-16
30	i st WEEK	3	Binary addition and subtraction (1's and 2's complement methods). Hexadecimal number system.Conversion from Binary to Hexadecimal		Teaching Class MID Exam II	1 1	Yes	Guest Lecture, Study Project	1	Yes		
31	3 RD WEEK	2	Decimal to Hexadecimal vice versa.NAND, NOR as universal gates, Exclusive – OR gate.		Teaching Class Assignment	1 1	Yes					
32	4 TH WEEK	2	De Morgan's Laws – statement and proof, Half and Full adders. Parallel adder circuits.		Teaching Class	2	Yes					
MON	TH: FEE	BRUAI	RY								YEAR:	2015-16
33	l ST WEEK	4	REVISION		Teaching Class	3	Yes	Group Discussion		Yes		
34	2 ND WEEK	3	REVISION		Teaching Class	2	Yes					
35	3 RD WEEK	2	REVISION		Teaching Class	3	Yes	9				

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36	4 TH WEEK	2	REVISION		Teaching Class	2	Yes		villa allila e decembra dilipita-		
MOI	TH: MA	RCH								YEAR	2015-16
37	1 ST WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016	=	<u> </u>						
38	2 ND WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016								

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SIGNATURE OF THE DEPARTMENT I/C Dr. K. Srinivasa Rao

Head Department of Physics V.S.M. College - Ramachandrapuram East Godavan Dt (A.P.) -533 255

S. Rangery SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE RAMACHANDRAPURAM-533 255 (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM CURRICULUM PLAN 2015-16

Department : Physics

CLASS: III B.Sc. (MPCS)

PAPER: III - Electricity, Magnetism and Electronics

Name of the Lecturer: Dr. K. Srinivasa Rao, M.Sc., M.Phil., Ph.D

					CURRICU	LAR ACT	VITY		CO-CURRI	CULARA	CTIVIT	Υ	,,
SERIAL	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MON	NTH: JU	L NE					·					YEAR	: 2015-16
1	3 RD WEEK	2	Remedial Coaching		Teaching Class	2	Yes						
2	4 TH WEEK	3	Remedial Coaching		Teaching Class	3	Yes						
MON	NTH: JUI	LY		1								YEAR	: 2015-16
3	l ST WEEK	3	Introduction to static electricity Gauss law statement, proof E due to Uniformly charged sphere.	Electrification	Teaching Class	3	Yes			_			
4	2 ND WEEK	3	charged cylindrical conductor and an infinite conducting sheet of charge. Deduction of Coulmb's law from Gauss law	Bad conductor	Teaching Class	3	Yes		Ward Counseling		Yes		
5	3 RD WEEK	4	Electric potential – Potential due to a charged spherical conductor. Electric field strength from the electric dipole and an infinite line of charge.	Related problems	Teaching Class Unit I	3	Yes	2	Book Reviews		Yes		
6	4 TH WEEK	4	Electric field strength from the electric dipole and an infinite line of charge. Potential of a uniformly charged circular disc and problems. An atomic view – Polar and nonpolar dielectrics in electric field	Freq. variations	Teaching Class Assignment	3	Yes		Ward Counseling		Yes		

7	5TH WEEK	2	An atomic view – Polar and non-polar dielectrics in electric field- potential energy of a dipole in an electric field.		Teaching Class	2	Yes					
MON	TH: AUC	GUST							1-275		YEAR:	2015-16
8	i st WEEK	3	Polarization and charge density Dielectrics and Gauss law - relation between D,E, and P vectors,Dielectric constant and susceptibility – boundary conditions at the dielectric surface.		Teaching Class Assignment	2	Yes					
9	2 ND WEEK	2	Capacity- working principle, Capacity of a concentric spheres and cylindrical condenser – capacity of a parallel plate condenser with and without dielectric.	Applications	Teaching Class	2	Yes	Ward Counseling		Yes		
10	3 RD WEEK	4	Force between plates of condenser – attracted disc electrometer construction and working, measurement of dielectric constant and potential difference. and problems.		Teaching Class Unit II	2	Yes	Group Discussion	1	Yes		
11	4 TH WEEK	3	Magnetic shell – potential due to magnetic shell – field due to magnetic shell – equivalent of electric circuit and magnetic shell. Application of field due to magnetic shell – magnetic induction (B) – Permeability and susceptibility Relation among B,H and I. Hysteresis loop.	X- ray production	Teaching Class	3	Yes	Ward Counseling		Yes		
MO	NTH: SEI	TEM	BER					 	_	1	YEAR	: 2015-16
12	l ST WEEK	4	Hall effect – cyclotron – synchrocyclotron and synchrotron - force on a current carrying conductor placed in a magnetic field, force and torque on a current loop,		Teaching Class Assignment	3	Yes	Study Projects	1	Yes		

13	2 ND WEEK	3	Biot –Savart's law and calculation of B due to long straight wire, a circular current loop and solenoid and problems.		Teaching Class	3	Yes	Ward Counseling, Book Reviews		Yes		
14	3 RD WEEK	3	induced emf – time varying magnetic fields,Betatron,Ballistic galvanometer,self and mutual inductance.		Teaching Class Unit III	1	Yes	QUIZ	1	Yes		
15	4 TH WEEK	3	Coefficient of coupling, calculation of self inductance of a long solenoid – toroid – energy stored in magnetic field – transformer – Construction, working, energy losses and efficiency and problems.		Teaching Class Unit Test - 2 Practical	2	Yes	Ward Counseling Seminars	1	Yes		
16	5TH WEEK	2	Growth and decay of currents in LR, CR circuits.		Teaching Class	1	Yes	Group Discussion	1	Yes		
MON	TH: OC	ГОВЕ	R					 			YEAR:	2015-16
17	1nd WEEK	1	LCR circuits – Critical damping.		Teaching Class Assignment	1	Yes					
18	2nd WEEK	3	Alternating current relation between current and voltage in pure R,C and L-vector diagrams – Power in ac circuits. LCR series and parallel resonant circuit – Q-factor.	Tuned circuits in radio and T.V,	Teaching Class	2	Yes	Ward Counseling, Class Room Seminars	1	Yes		
19	зтн WEEK	3	AC & DC motors-single phase, three phase.Magnetic Equations and electromagnetic waves: A review of basic laws of electricity and magnetism, Displacement current	eliminators and	Teaching Class MID Exam I	3	Yes	Ward Counseling		Yes		

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20	5 th WEEK	3	Maxwell's equations in differential form – Maxwell's wave equation		Teaching Class	3	Yes					
MON	TH: NO	VEMI	BER						i		YEAR:	2015-16
21	l ST WEEK	4	plane electromagnetic waves, Transverse nature of electromagnetic waves Poynting vector – production of electromagnetic waves (Hertz's experiment) Formation of electron energy bands in solids, classification of solids in terms of forbidden energy gap. Intrinsic and extrinsic semiconductors, Fermi level,		Teaching Class	4	Yes	Guest Lecture,Class Room Seminars		Yes		
22	2 ND WEEK	3	continuity equationIntrinsic and extrinsic semiconductors, Fermi level, continuity equation. p-n junction diode, Zener diode characteristicsTransistor as an amplifier concept of negative feed back and positive feed back – Barkhausen criterion.	MOSFET IC fabrication principle	Teaching Class	2	Yes	Ward Counseling, Quiz	1	Yes		
23	3 RD WEEK		HALF-YEARLY EXAMINATIONS - 2015							Yes		
24	4th WEEK		HALF-YEARLY EXAMINATIONS - 2015	1						Yes		
MON	TH: DE	CEMI	BER						_		YEAR	: 2015-16
25	l ST WEEK	. 3	zener diode voltage regulator. Half wave and full wave rectifiers and filters, ripple factor (quantitative)		Teaching Class	2	Yes	Ward Counseling Seminars	1	Yes		

26	2 ND WEEK	3	p n p and n p n transistors, current components in transistors, CB,CE and CC configurations –		Teaching Class	2	Yes		Ward Counseling, Study Projects	1	Yes		
27	3 rd WEEK	3	transistor hybrid parameters – determination of hybrid parameters from transistor characteristics	Applications to computers	Teaching Class Unit V	2	Yes		Guest Lecture		Yes		
28	4 TH WEEK	2	Transistor as an amplifier — concept of negative feed back and positive feed back – Barkhausen criterion,		Teaching Class	2	Yes		Ward Counseling		Yes		
29	5TH WEEK		RC coupled amplifier and phase shift oscillator (qualitative) Binary number system, converting Binary to Decimal and vice versa.		Teaching Class	2	Yes		Quiz	1	Yes		
												YEAR:	2015-16
30	l ST WEEK	3	Binary addition and subtraction (1's and 2's complement methods). Hexadecimal number system.Conversion from Binary to Hexadecimal		Teaching Class MID Exam II	1	Yes		Guest Lecture, Study Project	1	Yes		
31	3 RD WEEK	2	Decimal to Hexadecimal vice versa.NAND, NOR as universal gates, Exclusive – OR gate.		Teaching Class Assignment	1	Yes						
32	4 TH WEEK	2	De Morgan's Laws – statement and proof, Half and Full adders. Parallel adder circuits.	1	Teaching Class	2	Yes						
							·					YEAR	: 2015-16
MOI	NTH: FE	BRUA T			T 112 OF		Van		Group		Yes		
33	WEEK	4	REVISION		Teaching Class	3	Yes	-	Discussion	-		-	
34	2 ND WEEK	3	REVISION		Teaching Class	2	Yes			_	-		
35	3 RD WEEK	2	REVISION		Teaching Class	3	Yes						

30	4 TH WEEK	2	REVISION	Teaching Class	2	Yes			VEAR	: 2015-16
M	NTH: M	RCH				т —	 			
3	1ST		A.K.N.U. PRACTICAL EXAMINATIONS - 2016							
3	8 2 ND WEEK	1	A.K.N.U. PRACTICAL EXAMINATIONS - 2016							

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SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

Head Department of Pilyeics

V.S.M. College - Remachiandrapuram
East Godavan Dt (A.P.) -533 255

PRINCIPAL, V.S.M. COLLEGE

RAMACHANDRAPURAM-533 255 (E.G.OL)

V. S. M. COLLEGE: RAMACHANDRAPURAM CURRICULUM PLAN 2015 - 16

Department: Physics

CLASS: II B.Sc.(MPC)

PAPER: II - Thermodynamics and Optics

			Name of the	he Lecturer :	Ch. Satyanarayar	1a M.Sc.							
	WEEK	9			CURRICU	JLAR ACT	VITY		co-curri	CULAR	ACTIVIT	Y	
SERIAL	MONTH & WE	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MON	NTH: JUN	NE										YEAR: 2	015-16
1	3 RD WEEK	2	Remedial Coaching		Teaching Class	2	Yes						
2	4 TH WEEK	3	Remedial Coaching		Teaching Class	3	Yes						
MON	TH: JUL	Υ									1	YEAR: 2	015-16
3	1 ST WEEK	3	Deduction of Maxwell's law of distribution of molecular speeds, Experimental verification Toothed wheel experiment. Transport Phenamin Viscosity, thermal conductivity and diffusion of gases. Concept and derivation of translation and syste matrices.		Teaching Class Assignment	2	Yes		÷				
4	2 ND WEEK	3	position of the image planes and magnification of the optical system. Application of matrix methods to simple optical systems (1) thin lenses in contact (2) two thin lenses separated by distance.		Teaching Class	3	Yes		Ward Counseling		Yes		

5	3 RD WEEK	4	cardinal points of lens system, unit and nodal planes. Chromatic aberration in a lense, the achromatic doublet. Achromatism for two lenses in contact and separated by a distance – monochromatic in aberration.	Teaching Class Unit I	3 1	Yes	Book Reviews		Yes		
6	4 TH WEEK	4	The spherical aberration (longtitudinal spherical aberration) due to (1) a plane refracting surface and (2) a spherical surface (expressions without proof) Minimization of spherical aberrations – explanation of coma 7 astigmatism.	Teaching Class	4	Yes	Ward Counseling		Yes		
MON	NTH: AU	GUST							YEAR:	2015-10	6
7	1 ST WEEK	3	Reversible and Irreversible process, Carnot's engine, efficiency.Carnot's theorem, Second law of thermodynamics, different statements Thermodynamic scale of temperature – Entropy	 Teaching Class Assignment	2	Yes				ė	
8	2 ND WEEK	3	Entropy and disorder measurement of entropy changes in reversible and irreversible process Entropy of universe – Entropy.	Teaching Class	3	Yes	Ward Counseling		Yes		
9	3 RD WEEK		Temperature diagrams, change of entropy of perfect gas-change of entropy when ice changes into steam. Thermodynamic Potentials — Derivation of Maxwell's thermodynamic relations.	Teaching Class Unit II	2	Yes	Group Discussion	1	Yes		
10	4 TH WEEK		specific heats- Derivations for ratio and difference of two specific heats For perfect gas. Joule - Kelvin effect expression for Joule-Kelvin coefficient for perfect and wanderwaal's gas.	Teaching Class	4	Yes	Ward Counseling		Yes		

MON	NTH: SEP	тем	BER		Ī				,	YEAR: 2	015-16
11	I ST WEEK	3	Spontaneous stimulated emission – laser principle.Population inversion – Einstein coefficients – Types of lasers, He-Ne and Ruby lasers and the application of lasers.	Teaching Class Assignment	2	Yes	Study Projects		Yes		
12	2 ND WEEK	4	Optical fiber types, rays and modes step and graded index fibers and their structure fiber materials, principles of fiber communication Basic principles of Holography. Gabor Hologram and its limitations applications of Hologram.	Teaching Class	4	Yes	Ward Counseling, Book Reviews		Yes		
13	3 RD WEEK	3	Polarized light – Brewsters law – Malus law – phenomenon of double refraction in calcite .Refraction of plane wave incident on a negative crystal like calcite .	Teaching Class Unit III	2	Yes	QUIZ	1	Yes		
14	4 TH WEEK	4	Nichol prism, Analysis of polarized light quarter wave plate, Babnet compensator. Optical activity Laurent's half shade polarimeter experiment. The superposition principle, coherence, temporal and spatial conditions for interference of light.	Teaching Class	4	Yes	Ward Counseling Seminars		Yes		
MON	TH: OC	ГОВЕ	R			<u> </u>			,	YEAR: 2	015-16
15	1 ST WEEK	3	Interference by division of wave front Fresnel's biprism – determinination of wavelength of light change of phase on reflection determination of thickness of a transparent material using prism.	Teaching Class	2	Yes	Ward Counseling, Class Room Seminars	1	Yes		

16	2 ND WEEK	4	Interference by division of amplitude – oblique incidence of a plane wave on a thn film (the cosine law)Colors of thin films – non reflecting thin films Liquefaction of gases using Joule-Kelvin effectPorous Plug experiment.	Teaching Class Unit IV	3 1	Yes	Ward Counseling		Yes		
17	3 RD WEEK	4	Distinction between Joule's expansion, Adiabatic expansion and Joule-Thompson's expansion.expression for Joule-Kelvin cooling, liquefaction of Helium- Kapitza 's method, Adiabatic demagne-tization.	Teaching Class	4	Yes	Ward Counseling		Yes		
18	5 th WEEK	4	production of low temperatures principles of Refrigeration – Vapour compression type. Working of refrigerator and air conditioning machine. Effect of cloro fluro carbon on ozone layer.	Teaching Class	4	Yes					
MON	NTH: NO	VEME	BER							YEAR: 2	015-16
			Applications of substances at low temp. Black body, Fery's black body, distribution of energy				,				
19	l ST WEEK	4	in the spectrum of a black body Wein's displacement law, Wien's law, Raleigh Jeans law - Quantum theory of radiation.	Teaching Class	3	Yes	Study Projects,Ward Counseling, Quiz	1	Yes		

21	3 RD WEEK		HALF-YEARLY EXAMINATIONS - 2015						Yes		
22	4 th WEEK		HALF-YEARLY EXAMINATIONS - 2015						Yes		
MOI	NTH: DEC	СЕМВ	BER							'EAR: 20	015-16
23	l ST WEEK	4	Black Body Radiation, Rayleigh-Jean's formula.Planck's radiation law, Weins Displacement, Stefan's Boltzmann's law from Plancks formula.	Teaching Class	4	Yes					
24	2 ND WEEK		Application of Fermi-Dirac statistics to white dwarfs and Neutron stars interference by a plane parallel film illuminated by a point surface.	Teaching Class	3	Yes	Ward Counseling, Study Projects	×	Yes	ļ	
25	3 rd WEEK	4	Interference by film with two non parallel reflecting surfaces (wedge shaped film)determination of diameter of wire.Newton's rings in reflected and transmitted light, Determination of wavelength of monochromatic light Michelson Interferometer types of fringes	Teaching Class Unit V	3	Yes	Guest Lecture		Yes		
26	4 TH WEEK	3	determination of wavelength of monochromatic light, thickness of thin plane. Fraunhofer diffraction – diffraction due to a single slit and circular aperture. Limit of resolution two-slit Fraunhofer Fraunhofer diffraction pattern with N – Slits.	Teaching Class	4	Yes	Ward Counseling		Yes		

27	5TH WEEK	3	The Fourier transform and its properties the shifting theorem . application of the FT to Fourier diffraction due to single slit. The diffraction grating – normal and oblique incidence determination of wavelength of light	Teaching Class	2	Yes		Quiz	1	Yes		
MO	NTH: JAI	NUAR	Y			•				,	YEAR: 2	015-16
28	l ST WEEK	3	Fresnel diffraction – Fresnel half period zones.zone plated – diffraction at a straight edge – diffraction of plane waves by a straight edge. A double slit and diffraction grating, diffraction.	Teaching Class	3	Yes		Guest Lecture,Study Project	648	Yes		
29	2 ND WEEK		PONGAL HOLIDAYS PRE- PUBLIC EXAMINATIONS									
30	3 RD WEEK	1	REVISION	Teaching Class	2	Yes						
31	4 TH WEEK	4	REVISION	Teaching Class	3	Yes						
32	5 th WEEK	1	REVISION	Teaching Class								
MON	TH: FEE	RUAI	RY		-		_	<u></u>		,	EAR: 20	015-16
33	1 ST WEEK	4	REVISION	Teaching Class	4	Yes		Group Discussion		Yes		
34	2 ND WEEK	3	REVISION	Teaching Class	3	Yes						
35	3 RD WEEK	2	REVISION	Teaching Class	2	Yes						

36	4 TH WEEK	2	REVISION	Teaching Class	2	Yes				
MON	NTH: MA	RCH					 	-	 EAR: 2	015-16
37	l ST WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016							
38	2 ND WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016							

Unity anayoyana Sonature of the Lecturer

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

Mids. M.Pil., Ph.D.
Head Depenment of Pitysics
V.S.M. College - Remachandrepuram
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SIGNATURE OF THE PRINCIPAL PRINCIPAL, V.S.M. COLLEGE

RAMACHANDRAPURAM-533 255 (E G.OL)

V. S. M. COLLEGE: RAMACHANDRAPURAM CURRICULUM PLAN 2015 - 16

Department: Physics

PAPER: II - Thermodynamics and Optics

CLASS: II B.Sc.(MPCS)

Name of the Lecturer: Ch. Satyanarayana M.Sc.

	WEEK	Ë			Currice Currice				CO-CURR	ICULAR .	ACTIVIT	Y	
SERIAL	MONTH & W	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
МО	NTH: JUI	VE.				•					1	EAR: 2	015-16
1	3 RD WEEK	2	Remedial Coaching		Teaching Class	2	Yes						
2	4 TH WEEK	3	Remedial Coaching		Teaching Class	3	Yes						
MO	NTH: JUI	Υ									١	EAR: 2	015-16
3	l ST WEEK	4	Deduction of Maxwell's law of distribution of molecular speeds, Experimental verification Toothed wheel experiment. Transport Phenamin Viscosity, thermal conductivity and diffusion of gases. Concept and derivation of translation and syste matrices.		Teaching Class Assignment	3 1	Yes						
4	2 ND WEEK	4	position of the image planes and magnification of the optical system. Application of matrix methods to simple optical systems (1) thin lenses in contact (2) two thin lenses separated by distance.		Teaching Class	4	Yes		Ward Counseling		Yes		

5	3 RD WEEK	4	cardinal points of lens system, unit and nodal planes. Chromatic aberration in a lense, the achromatic doublet. Achromatism for two lenses in contact and separated by a distance – monochromatic in aberration.		Teaching Class Unit I	3 1	Yes	Book Reviews		Yes		
6	4 TH WEEK	4	The spherical aberration (longtitudinal spherical aberration) due to (l_a plane refracting surface and (2) a spherical surface (expressions without proof) Minimization of spherical aberrations – explanation of coma – astigmatism.		Teaching Class	4	Yes	Ward Counseling		Yes		
MO	NTH: AU	GUST	•							YEAR	2014-1	5
7	l ST WEEK	3	Reversible and Irreversible process, Carnot's engine, efficiency.Carnot's theorem, Second law of thermodynamics, different statements Thermodynamic scale of temperature – Entropy		Teaching Class Assignment	2	Yes					
8	2 ND WEEK	3	Entropy and disorder measurement of entropy changes in reversible and irreversible process Entropy of universe – Entropy .		Teaching Class	3	Yes	Ward Counseling		Yes		
9	3 RD WEEK		Temperature diagrams, change of entropy of perfect gas-change of entropy when ice changes into steam. Thermodynamic Potentials – Derivation of Maxwell's thermodynamic relations.	1	Teaching Class Unit II	2	Yes	Group Discussion	1	Yes		
10	4 TH WEEK	3	specific heats- Derivations for ratio and difference of two specific heats For perfect gas.Joule – Kelvin effect expression for Joule-Kelvin coefficient for perfect and wanderwaal's gas.		Teaching Class	3	Yes	Ward Counseling		Yes		

MO	NTH: SEI	PTEM	BER							,	YEAR: 2	.015-16
11	l ST WEEK	3	Spontaneous stimulated emission – laser principle.Population inversion – Einstein coefficients – Types of lasers, He-Ne and Ruby lasers and the application of lasers.		Teaching Class Assignment	2	Yes	Study Projects		Yes		
12	2 ND WEEK	4	Optical fiber types, rays and modes step and graded index fibers and their structure fiber materials, principles of fiber communication Basic principles of Holography. Gabor Hologram and its limitations applications of Hologram.		Teaching Class	4	Yes	Ward Counseling, Book Reviews		Yes		
13	3 RD WEEK	3	Polarized light – Brewsters law – Malus law – phenomenon of double refraction in calcite .Refraction of plane wave incident on a negative crystal like calcite .	1	Teaching Class Unit III	2	Yes	QUIZ	1	Yes		
14	4 TH WEEK	4	Nichol prism, Analysis of polarized light quarter wave plate, Babnet compensator. Optical activity Laurent's half shade polarimeter experiment. The superposition principle, coherence, temporal and spatial conditions for interference of light.		Teaching Class	4	Yes	Ward Counseling Seminars		Yes		
MON	TH: OC	гове	R								/EAR: 2	015-16
15	l ST WEEK	3	Interference by division of wave front Fresnel's biprism – determinination of wavelength of light change of phase on reflection determination of thickness of a transparent material using prism.		Teaching Class	2	Yes	Ward Counseling, Class Room Seminars	1	Yes		

6	2 ND WEEK	4	Interference by division of amplitude – oblique incidence of a plane wave on a thn film (the cosine law)Colors of thin films – non reflecting thin films Liquefaction of gases using Joule-Kelvin effectPorous Plug experiment.	Teaching Class Unit IV	3	Yes	Ward Counseling	,	Yes	
17	3 RD WEEK		Distinction between Joule's expansion, Adiabatic expansion and Joule-Thompson's expansion.expression for Joule-Kelvin cooling, liquefaction of Helium- Kapitza 's method, Adiabatic demagne-tization.	Teaching Class	3	Yes	Ward Counseling		Yes	
18	5 th WEEK	4	production of low temperatures principles of Refrigeration – Vapour compression type. Working of refrigerator and air conditioning machine. Effect of cloro fluro carbon on ozone layer.	Teaching Class	4	Yes				/EAR: 2015-
10N	 TH: NO'	/EMI	BER	 	Γ	г - т				
19	l ST WEEK	4	Applications of substances at low temp. Black body, Fery's black body, distribution of energy in the spectrum of a black body Wein's displacement law, Wien's law, Raleigh Jeans law – Quantum theory of radiation.	Teaching Class	3	Yes	Study Projects,Ward Counseling, Quiz	1	Yes	
20	2 ND WEEK	4	Angstrom pyhheliometer, determination of Solar constant Introduction to statistical mechanics. concept of ensembles, Phase space.Maxwell-Boltzmann's distribution law, Molecular energies in an ideal gas Bose-Einstein Distribution law, Fermi-Dirac Distribution law, comparison of three distribution laws.	Teaching Class	3	Yes	Guest Lecture,Class Room Seminars	1	Yes	

21	3 RD WEEK		HALF-YEARLY EXAMINATIONS - 2015						Y	es		
22	4 th WEEK		HALF-YEARLY EXAMINATIONS - 2015						Y	es_		
400	 TH: DEC	EME	BER							Y	EAR: 2	015-1
23	I ST WEEK	4	Black Body Radiation, Rayleigh-Jean's formula.Planck's radiation law, Weins Displacement, Stefan's Boltzmann's law from Plancks formula.	1	Teaching Class	4	Yes					
24	2 ND WEEK	3	Application of Fermi-Dirac statistics to white dwarfs and Neutron stars interference by a plane parallel film illuminated by a point surface.		Teaching Class	3	Yes	Ward Counseling, Study Projects		Yes		
25	3 rd WEEK	4	Interference by film with two non parallel reflecting surfaces (wedge shaped film)determination of diameter of wire.Newton's rings in reflected and transmitted light, Determination of wavelength of monochromatic light Michelson Interferometer types of fringes		Teaching Class Unit V	3 1	Yes	Guest Lecture		Yes		
26	4 TH WEEK	3	determination of wavelength of monochromatic light, thickness of thin plane. Fraunhofer diffraction — diffraction due to a single slit and circular aperture. Limit of resolution two-slit Fraunhofer Fraunhofer diffraction pattern with N — Slits.		Teaching Class	4	Yes	Ward Counseling		Yes		

27	STH WEEK	2	The Fourier transform and its properties the shifting theorem. application of the FT to Fourier diffraction due to single slit. The diffraction grating – normal and oblique incidence determination of wavelength of light		Teaching Class	2	Yes	Quiz	1	Yes		
MON	TH: JAN	IUAR'	Υ					 		, <u> </u>	/EAR: 20	015-16
28	1 ST WEEK		Fresnel diffraction – Fresnel half period zones.zone plated – diffraction at a straight edge – diffraction of plane waves by a straight edge. A double slit and diffraction grating, diffraction.		Teaching Class	3	Yes	Guest Lecture,Study Project		Yes		
29	2 ND WEEK		PONGAL HOLIDAYS PRE- PUBLIC EXAMINATIONS									
30	3 RD WEEK	1	REVISION		Teaching Class	2	Yes					
31	4 TH WEEK	4	REVISION	w T	Teaching Class	3	Yes					
32	5 th WEEK	I	REVISION		Teaching Class							
MO	NTH: FEI	BRUA	RY							,	YEAR: 2	015-16
33	1 ST WEEK	4	REVISION		Teaching Class	4	Yes	Group Discussion		Yes		
34	2 ND WEEK	3	REVISION		Teaching Class	3	Yes					
35	3 RD WEEK	2	REVISION		Teaching Class	2	Yes					

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36	4 TH WEEK	2	REVISION		Teaching Class	2	Yes			/EAR: 2	016 16
		<u> </u>								EAR: Z	012-10
MON	NTH: MA	RCH					1				
37	1 ST WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016	 							
38	2 ND WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016	1							

K-6-11

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

Mich., M.Phil., Ph.D.

Head Department of Physics

V.S.M. Coffege - Remachandrapuram

East Godavan Dt (A.P.) - 533 255

PRINCIPAL, V.S.M. COLLEGE RAMACHANDRAPURAM-533 256 (E.G.DL)

V. S. M. COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN 2015 - 16

Department: Physics

CLASS: III B.Sc. (MPC)

Name of the Lecturer: V. Naga Babu M.Sc.

PAPER: IV - Modern Physics

	- W			of the Lecturer : v	CURRIC		TVITY		CO-CURR	ICULAR	ACTIVI		
SERIAL	MONTH 8 WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MOI	NTH: JUI	NE				·						YEAR	: 2015-16
1	3 RD WEEK	3	Remedial Coaching		Teaching Class	3	yes						
2	4 TH WEEK	3	Remedial Coaching		Teaching Class	3	yes						
MOI	TH: JUI	Y		П								YEAR	: 2015-16
3	l ST WEEK	3	Introduction – Drawbacks of Bohr's atomic model.Sommerfeld's elliptical orbits – relativistic correction (no derivation).	1	Teaching Class	3	yes						
4	2 ND WEEK	2	Stern & Gerlach experiment Vector atom model and quantum numbers associated with it.L-S and j-j coupling schemes. Spectral terms, selection rules, intensity rules.		Teaching Class	2	Yes		Ward Counseling	yes			
5	3 RD WEEK	3	Spectra of alkali atomsdoublet fine structure. Alkaline earth spectra, singlet and triplet fine structure. Zeeman Effect, Paschen-Back Effect and Stark Effect (basic idea).		Teaching Class Unit I	2	Yes		Book Reviews	yes			
6	4 TH WEEK	3	Types of molecular spectra, pure rotational energies and spectrum of diatomic molecule, determination of internuclear distance.		Teaching Class Assignment	2	Yes		Ward Counseling)es			_

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7	5 TH WEEK	1	Vibrational energies and spectrum of diatomic molecule.Raman effect		Teaching Class	1	Yes					
MOI	NTH: AU	GUST									YEAR:	2015-16
8	1 ST WEEK	3	Classical theory of Raman effect. Experimental arrangement for Raman effect and its applications. Spectral radiation – Planck's law.		Teaching Class Assignment	2	yez					
9	2 ND WEEK	2	Photoelectric effect – Einstien's photoelectric equation. Compton's effect (quantitative) experimental verification.		Teaching Class	2	yes	Ward Counseling	γes			
10	3 RD WEEK	2	Stability of an atomBohr's atomic theory. Limitations of old quantum theory.De Broglie's hypothesis		Teaching Class Unit II	1	yes					
11	4 TH WEEK	3	wavelength of matter waves, properties of matter waves. Phase and group velocities. Vibrational energies and spectrum of diatomic molecule.		Teaching Class	2	yes	Group Discussion	1	<i>ا</i> رب <i>ا</i>	is .	
12	5 TH WEEK	1	Davisson and Germer experiment. Double slit experiment.		Teaching Class	1	Yes					
MON	NTH: SEP	TEM	BER								YEAR:	2015-16
13	1 ST WEEK	3	Standing de Brogile waves of electron in Bohr orbits. Heisenberg's uncertainty principle for position and momentum (x and px), Energy and time (E and t).		Teaching Class Assignment	2	yes	Study Projects		yw		
14	2 ND WEEK	2	Gamma ray microscope. Diffraction by a single slit. Position of electron in a Bohr orbit. Particle in a box. Complementary principle of Bohr.	w 1	Teaching Class	2	Yes	Ward Counseling		Yes		

15	3 RD WEEK	3	Schrodinger time independent and time dependent wave equations. Wave function properties – Significance.	Teaching Class Unit III	1	Yes	QUIZ	1	yes		
16	4 TH WEEK	3	Basic postulates of quantum mechanics. Operators, eigen functions and eigen values, expectation values. Application of Schrodinger wave equation to particle in one and three dimensional boxes.	Teaching Class	2	yes	Ward Counseling, Book Reviews	1	yes		
MON	NTH: OC	TOBE	R							YEAR: 2	015-16
17	l ST WEEK	2	potential step and potential barrier. Basic properties of nucleus – size, charge, mass, spin, magnetic dipole moment and electric quadrupole moment.	Teaching Class	2	Yes	Ward Counseling		ye)		
18	2 ND WEEK	3	Binding energy of nucleus, deuteron binding energy, p-p and n-p scattering (concepts)Nuclear forces. Nuclear models – liquid drop model, shell model.	Teaching Class Unit IV	1 1	Yes	Ward Counseling, Class Room Seminars	1	Yes		
19	3 RD WEEK	2	Range of alpha particles, Geiger – Nuttal law. Gammow's theory of alpha decay.	Teaching Class	2	yes	Ward Counseling		Yes		
20	5 th WEEK	2	Geiger – Nuttal law from Gammow's theory. Beta spectrum – neutrino hypothesis, Fermi's theory of β-decay (qualitative).								
MON	ON :HTF	VEMI		 						YEAR: 2	015-16
21	1 ST WEEK	3	Types of nuclear reactions, channels, nuclear reaction kinematics.Compound nucleus, direct reactions (concepts).GM counter.	Teaching Class	3	ye)	Study Projects		yes		
22	2 ND WEEK	3	proportional counter, scintillation counter. Wilson cloud chamber and solid state detector Crystalline nature of matter.	Teaching Class	2	Yel	Ward Counseling, Quiz	1	pes		

23	3 RD WEEK	3	Cystal lattice, Unit Cell, Elements of symmetry. Crystal systems. Bravais lattices. Miller indices. Simple crystal structures (S.C., BCC, CsCl, FCC, NaCl diamond and Zinc Blends)		Teaching Class	2	yes	Guest Lecture,Clas s Room Seminars	1	Yes		
24	4 th WEEK	3	HALF-YEARLY EXAMINATIONS - 2015	= ====	Teaching Class	2	Hes	 Ward Counseling Seminars	1	Yes		
25	5TH WEEK	1	HALF-YEARLY EXAMINATIONS - 2015		Teaching Class	1	Yes					
MON	TH: DE	CEME	ER							,	YEAR:	2015-16
26	l ST WEEK	2	Diffraction of X -rays by crystals.Bragg's law, Experimental techniques - Laue's method and powder method.	1	Teaching Class	2	Yes					
27	2 ND WEEK	3	Introduction, nanoparticles, metal nanoclusters, semiconductor nanoparticles, carbon clusters, carbon nanotubes, quantum nanostructures.		Teaching Class	3	yes	Ward Counseling, Study Projects	Y	yes		
28	3 rd WEEK	3	nanodot, nanowire and quantum well. Fabrication of quantum nanostructures. Types of bonding in crystals – characteristics of crystals with different bindings.Lattice energy of ionic crystals – determination of Medelung constant for NaCl crystal.		Teaching Class Unit V	2	Yes					

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29	4 TH WEEK	1	Calculation of Born coefficient and repulsive exponent. Born — Haber cycle.Magnetic properties of dia, para and ferromagnetic materials.		Teaching Class	1)es				
MON	TH: JAN	IUAR'	Y							YEAR	: 2015-16
30	l st WEEK	2	Langevin's theory of paramagnetism. Weiss' theory of ferromagnetism –Concepts of magnetic domains, antiferromagnetism and ferrimagnetism ferrites and their applications. Basic experimental facts – zero resistance.		Teaching Class	2	Yes	Guest Lecture,Stud y Project			
31	2 ND WEEK	2	Effect of magnetic field, Meissner effect, persistent current, Isotope effect Thermodynamic properties, specific heat, entropy. Type I and Type II superconductors. Elements of BCS theory-Cooper pairs. Applications. High temperature superconductors.		Teaching Class	2	Yes	Ward Counseling			
32	3 RD WEEK		PONGAL HOLIDAYS PRE-PUBLIC EXAMINATIONS								
33	4 TH WEEK	3	REVISION		Teaching Class	3	yes				
34	5 th WEEK	3	REVISION		Teaching Class	3	yes				
MON	TH: FEE	BRUA	RY				_			YEAR	: 2015-16
35	1 ST WEEK	4	REVISION		Teaching Class	3	Yes	Group Discussion	Yes		
36	2 ND WEEK	3	REVISION	1-	Teaching Class	2	Yes				
37	3 RD WEEK	2	REVISION		Teaching Class	3	Yes				

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38	4 TH WEEK	2	REVISION	Teaching Class	2	Yes				
MOI	NTH: MA	RCH		 				 	YEAR	: 2015-16
39	1 ST WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016							
40	2 ND WEEK	_	A.K.N.U. PRACTICAL EXAMINATIONS - 2016				 	!		

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SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

Mdc. MPNL, Ph.D.
Head Department of Privaics
V.S.M. College - Remachandrapuram
East Godavan Dt (A.P.) -533 255

S. Muguegan

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE RAMACHANDRAPURAM-533 255 (E G.DL)

V. S. M. COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN 2015 - 16

Department: Physics

CLASS: III B.Sc. (MPC)

Name of the Lecturer: V. Naga Babu M.Sc.

PAPER: IV - Modern Physics

				of the Lecturer: v	CURRICI		TVITY		CO-CURR	ICULAR	ACTIVI	ГҮ	
SERIAL	MONTH & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MON	NTH: JUI	NE		1								YEAR	2015-16
1	3 RD WEEK	3	Remedial Coaching		Teaching Class	3	Yes						
2	4 TH WEEK	3	Remedial Coaching	1	Teaching Class	3	Yes						
MON	TH: JUI	Υ										YEAR	2015-16
3	l st WEEK	2	Introduction – Drawbacks of Bohr's atomic model.Sommerfeld's elliptical orbits – relativistic correction (no derivation).		Teaching Class	2	Ye)						
4	2 ND WEEK	3	Stern & Gerlach experiment Vector atom model and quantum numbers associated with it.L-S and j-j coupling schemes. Spectral terms, selection rules, intensity rules.	7. I	Teaching Class	3	Υ _Έ ς		Ward Counseling		yes 		
5	3 RD WEEK	3	Spectra of alkali atomsdoublet fine structure. Alkaline earth spectra, singlet and triplet fine structure. Zeeman Effect, Paschen-Back Effect and Stark Effect (basic idea).		Teaching Class Unit I	2	Yeg		Book Reviews)ej		
6	4 TH WEEK	3	Types of molecular spectra, pure rotational energies and spectrum of diatomic molecule, determination of internuclear distance.		Teaching Class Assignment	2	Yes		Ward Counseling		Yes		

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7	5 TH WEEK	1	Vibrational energies and spectrum of diatomic molecule.Raman effect		Teaching Class	1	yes			yes		
MON	NTH: AU	GUST									YEAR:	2015-16
8	1 ST WEEK	3	Classical theory of Raman effect. Experimental arrangement for Raman effect and its applications. Spectral radiation – Planck's law.		Teaching Class Assignment	2)es			Yes	_	
9	2 ND WEEK	2	Photoelectric effect – Einstien's photoelectric equation. Compton's effect (quantitative) experimental verification.		Teaching Class	2	yes	Ward Counseling		ye)		
10	3 RD WEEK	3	Stability of an atomBohr's atomic theory. Limitations of old quantum theory.De Broglie's hypothesis		Teaching Class Unit II	2	ye)					i
11	4 TH WEEK	3	wavelength of matter waves, properties of matter waves. Phase and group velocities. Vibrational energies and spectrum of diatomic molecule.		Teaching Class	2	ye)	Group Discussion	1	Yes		
12	5 TH WEEK	1	Davisson and Germer experiment. Double slit experiment.		Teaching Class	1	yel		a d	yes		
MON	TH: SEP	TEM	BER	1							YEAR:	2015-16
13	1 ST WEEK	3	Standing de Brogile waves of electron in Bohr orbits.Heisenberg's uncertainty principle for position and momentum (x and px), Energy and time (E and t).		Teaching Class Assignment	2	yes	Study Projects		Yes		
14	2 ND WEEK	3	Gamma ray microscope. Diffraction by a single slit. Position of electron in a Bohr orbit. Particle in a box. Complementary principle of Bohr.		Teaching Class	3	Yes	Ward Counseling		ye)		

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15	3 RD WEEK	3	Schrodinger time independent and time dependent wave equations. Wave function properties – Significance.		Teaching Class Unit III	1	yes	QUIZ	1	Yes		
16	4 TH WEEK	3	Basic postulates of quantum mechanics. Operators, eigen functions and eigen values, expectation values. Application of Schrodinger wave equation to particle in one and three dimensional boxes.		Teaching Class	2	Ye)	Ward Counseling, Book Reviews	1	Jus		
MON	TH: OC	ГОВЕ	R	E							YEAR: 201	5-1
17	l ST WEEK	3	potential step and potential barrier. Basic properties of nucleus – size, charge, mass, spin, magnetic dipole moment and electric quadrupole moment.		Teaching Class	3	Yes	Ward Counseling		Yes		
18	2 ND WEEK	3	Binding energy of nucleus, deuteron binding energy, p-p and n-p scattering (concepts)Nuclear forces. Nuclear models – liquid drop model, shell model.		Teaching Class Unit IV	1	yes	Ward Counseling, Class Room Seminars	1	yes		
19	3 RD WEEK	2	Range of alpha particles, Geiger - Nuttal law. Gammow's theory of alpha decay.		Teaching Class	2	yes	Ward Counseling		Yes		74
20	5 th WEEK	2	Geiger – Nuttal law from Gammow's theory. Beta spectrum – neutrino hypothesis, Fermi's theory of β-decay (qualitative).	ı								4
MON	TH: NO	VEMI	BER								YEAR: 201	15-16
21	l ST WEEK	3	Types of nuclear reactions, channels, nuclear reaction kinematics. Compound nucleus, direct reactions (concepts). GM counter.		Teaching Class	3	yes	Study Projects		yes		
22	2 ND WEEK	3	proportional counter, scintillation counter. Wilson cloud chamber and solid state detector Crystalline nature of matter.	24 - 25 - 25 - 25 - 25 - 25 - 25 - 25 -	Teaching Class	2	Yes	Ward Counseling, Quiz	1			

23	3 RD WEEK	3	Cystal lattice, Unit Cell, Elements of symmetry. Crystal systems. Bravais lattices. Miller indices. Simple crystal structures (S.C., BCC, CsCl, FCC, NaCl diamond and Zinc Blends)		Teaching Class	2	Yes	Guest Lecture,Clas s Room Seminars	1	10		
24	4 th WEEK	3	HALF-YEARLY EXAMINATIONS - 2015		Teaching Class	2	Yes	Ward Counseling Seminars	1	Yes		
25	5TH WEEK	1	HALF-YEARLY EXAMINATIONS - 2015		Teaching Class	1	Yes					
MON	TH: DEC	СЕМІ	BER								YEAR:	2015-16
26	l ST WEEK	2	Diffraction of X -rays by crystals.Bragg's law, Experimental techniques - Laue's method and powder method.		Teaching Class	2	Yes				23	
27	2 ND WEEK	3	Introduction, nanoparticles, metal nanoclusters, semiconductor nanoparticles, carbon clusters, carbon nanotubes, quantum nanostructures.	1	Teaching Class	3	10)	Ward Counseling, Study Projects		Yej		
28	3 rd WEEK	3	nanodot, nanowire and quantum well. Fabrication of quantum nanostructures. Types of bonding in crystals – characteristics of crystals with different bindings.Lattice energy of ionic crystals – determination of Medelung constant for NaCl crystal.		Teaching Class Unit V	2	Ye)					

29	4 TH WEEK	1	Calculation of Born coefficient and repulsive exponent. Born — Haber cycle.Magnetic properties of dia, para and ferromagnetic materials.	Teaching Class	1	Yej					
MON	NTH: JAN	NUAR	Y							YEAR	2015-16
30	l ST WEEK	2	Langevin's theory of paramagnetism. Weiss' theory of ferromagnetism –Concepts of magnetic domains, antiferromagnetism and ferrimagnetism ferrites and their applications. Basic experimental facts – zero resistance.	Teaching Class	2	Yes	Guest Lecture,Stud y Project	7	Yes		
31	2 ND WEEK	2	Effect of magnetic field, Meissner effect, persistent current, Isotope effect Thermodynamic properties, specific heat, entropy. Type I and Type II superconductors. Elements of BCS theory-Cooper pairs. Applications. High temperature superconductors.	Teaching Class	2	74)	Ward Counseling		Yes		
32	3 RD WEEK		PONGAL HOLIDAYS PRE- PUBLIC EXAMINATIONS						,		
33	4 TH WEEK	3	REVISION	Teaching Class	3	Yej					
34	5 th WEEK	3	REVISION	Teaching Class	3	Yey	25 cm ft 1				
MON	TH: FEB	RUA	RY				-			YEAR:	2015-16
35	1 ST WEEK	4	REVISION	Teaching Class	3	Yes	 Group Discussion		Yes		
36	2 ND WEEK	3	REVISION	Teaching Class	2	Yes					
37	3 RD WEEK	2	REVISION	Teaching Class	3	Yes					

38	4 TH WEEK	2	REVISION		Teaching Class	2	Yes					
MO	NTH: MA	DCH				_					YEAR	2015-16
MOI	TIII. NIA	ICII					1		1	1		
39	1 ST WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016									
40	2 ND WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016	1								

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Ruo MSt., M.Phil., Ph.D.
Head Department of Physics
V.S.M. College - Remachandrapuram
East Godavan Dt (A.P.) +533 255

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE RAMACHANDRAPURAM-533 255 (E G.OL)

V.S.M.COLLEGE: RAMACHANDRAPURAM

CURRICULUM PLAN - 2015 - 16

Department : Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-I

PAPER: I -Mechanics and Properties of Matter

			Nam	e of the Lecturer:	R. Nageswara Rao M.S	c.(Tech.)							
	- N	E13			CURRICULAR	ACTVIT			CO-CURR	ICULAR		ΓY	, so
SERIAL	MONTH &	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: JUL	Υ										YEAR	2015-16
1	I ST WEEK	4	Scalar and vector fields, gradient of a scalar field and its physical significance. Divergence and curl of a vector field and related problems.		Teaching Class Assignment	3	Yes				Yes		
2	2 ND WEEK	4	Vector integration, line, surface and volume integrals. Stokes theorem.	2	Teaching Class	4	Yes		Ward Counseling		Yes		
3	3 RD WEEK	3	Gauss and Greens theorems- simple applications. Fundamentals of vibrations, Damped and forced oscillations		Teaching Class	3	Yes	:	Book Reviews		Yes		
4	4 TH WEEK	4	Motion of variable mass system, motion of a rocket, multi-stage rocket. Collisions in two and three dimensions.	2	Teaching Class	4	Yes		Ward Counseling		Yes		
5	5 th WEEK	2	concept of impact parameter scattering cross-section. Rutherford scattering.Definition of Rigid body, rotational kinematic relations		Teaching Class Unit I	1	Yes		Guest Lecture, Class Room Seminars	1 1	Yes		
MON	TH: AU	GUST										YEAR	2015-16
6	l ST WEEK		I MID Examinations								Yes		

7	2 ND WEEK	3	Equation of motion for a rotating body, angular momentum and inertial tensor. Eulers equation, precession of a top, Gyroscope.		Teaching Class	3	Yes	Ward Counseling		Yes		
8	3 RD WEEK	4	Mechanics of continuous media and Central Forces Classification of beams, types of bending, point load, distributed load		Teaching Class Unit II	2	Yes	Group Discussion	1	Yes		
9	4 TH WEEK	4	shearing force and bending moment. sign conventions simple supported beam carrying a concentrated load at mid span, cantilever with an end load.		Teaching Class	4	Yes	Ward Counseling		Yes		
MON	NTH: SEP	TEM	BER								YEAR:	2015-16
10	l ST WEEK	4	Central forces – definition and examples, conservative nature of central forces, conservative force as a negative gradient of potential energy		Teaching Class Assignment	3 1	Yes	Study Projects		Yes		
11	2 ND WEEK	4	Equation of motion under a central force motion under inverse square law,		Teaching Class	3	Yes	Ward Counseling, Book Reviews	1	Yes		
12	3 RD WEEK	4	Derivation of Kepler's laws.		Teaching Class Unit III	2	Yes	QUIZ	1	Yes		
13	4 TH WEEK	3	Special theory of relativity, Galilean relativity, absolute frames,		Teaching Class	3	Yes	Ward Counseling Seminars		Yes		
14	5 th WEEK	2	Michelson-Morley experimentPostulates of special theory of relativity.		Teaching Class	1	Yes	Group Discussion	1	Yes		
MON	NTH: OC	ГОВЕ	R								YEAR:	2015-16
15	l ST WEEK		II MID Examinations							Yes		

21	4 th WEEK	4	SEMESTER END EXAMINATIONS									
20	3 RD WEEK	4	PRACTICAL EXAMINATIONS		×							
19	2 ND WEEK	3	REVISION			<u> </u>						
MON	TH: NO	VEMB	BER								YEAR:	2015-16
18	5 th WEEK	2	REVISION						-			
17	3 RD WEEK		time dilation, length contraction, mass- energy relation.	Teaching Clas Unit IV	ss 2 1	Yes	200	Ward Counseling, Quiz		Yes		
16	WEEK	2	Lorentz transformation.	Teaching Clas	ss 1	Yes		Class Room Seminars	1	Yes		

Postulates of special theory of relativity.

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

M.St., M.Phil., Ph.D.

Head Department of Physics

V.S.M. Collège - Ramachandrapuram
East Gacavan Dt (A.P.) - 533 255

SIGNATURE OF THE PRINCIPAL PRINCIPAL VS.M. COLLEGE

Ward

Counseling,

RAMACHANDRAPURAM-833 255 (E.G.CL)

V.S.M.COLLEGE: RAMACHANDRAPURAM CURRICULUM PLAN - 2015 - 16

Department : Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

PAPER: Waves & Oscillations

ı	1	1			cturer : R. Nageswara Rao	_	:11.)			_			
<u> </u>	¥ % ∠	IS BLE		ADDITIONAL	CURRICULAR A	CTVITY				RICULA	R ACTIV	ITY	
SERIAL		HOURS		INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	АСТІИІТЧ	HOURS	WHETHER	JF NOT, ALTERNATE DATE	REMARKS
МО	NTH: DE	СЕМІ	BER								1-0		
1	l ST WEEK	3	Simple harmonic oscillator, and solution of the differential equation—Physical . characteristics of SHM		Teaching Class	3	Yes					YEAR	2015-
2	2 ND WEEK	4	torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g', combination of two mutually perpendicular simple harmonic		Teaching Class	4	Yes		Ward Counseling,		Yes	ŵ	
3	3 rd WEEK	4	Lissajous figures, Damped harmonic oscillator, solution of the differential equation of damped oscillator.		Teaching Class Unit V	2	Yes		Guest Lecture	1	Yes		
4	4th WEEK	2	Energy considerations.Relaxation time quality factor	1	Teaching Class	2	Yes		Ward Counseling		Yes		
5	5 th WEEK	2	differential equation of forced oscillator and its solution. logarithmic decrement.		Teaching Class	2	Yes						
1ON	TH: JAN	UARY	, <u> </u>									VD.D	
6	I ST WEEK	3 8	Complex vibrations Fourier theorem and evaluation of the Fourier coefficients.		Feaching Class	2	Yes		Guest Lecture,	1	Yes	YEAR: 2	:015-1

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7	2 ND WEEK		I MID Examinations						Yes		
8	3 RD WEEK	2	Analysis of periodic wave functions- square wave, triangular wave.Longitudinal vibrations in bars.	Teaching Class	2	Yes	Study Projects		Yes		
9	4 TH WEEK	3	wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar fixed at one	Teaching Class	3	Yes			_		
10	5 th WEEK	1	Transverse wave propagation along a stretched string.	Teaching Class	1						
MON	NTH: FEB	RUA	RY				 <u></u>			YEAR	2015-16
11	l ST WEEK	2	General solution of wave equation and its significance.	Teaching Class	2	Yes					16
12	2 ND WEEK	2	General solution of wave equation and its significance.	Teaching Class	1	Yes	Quiz	1	Yes		
13	3 RD WEEK		Modes of vibration of stretched string clamped at both ends, Overtones,			Yes					
14	4 TH WEEK	2	energy transport, transverse impedance.			Yes					
MON	TH: MAI	RCH								YEAR:	2015-16
15	l ST WEEK		II MID Examinations						Yes		
16	2 ND WEEK	2	Ultrasonics Ultrasonics, properties of ultrasonic	 Teaching Class	2	Yes	Group Discussion		Yes		

17	3 RD WEEK	3	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.	Teaching Class	3	Yes				
18	4 TH WEEK	2	Noise Pollution – origin, effect on the environment - prevention	Teaching Class	2	Yes	Study Project	Yes		
MOI	TH: API	RIL							YEAR	: 2015-16
19	I ST WEEK		REVISION							
20	2 ND WEEK		PRACTICAL EXAMINATIONS							
21	3 RD WEEK		SEMESTER END EXAMINATIONS							
22	4 TH WEEK		SEMESTER END EXAMINATIONS							

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

WSb., M.Phil., Ph.D.
Head Depertment of Physics
V.S.M. Collège – Ramachandrapuram
East Godavan Dt. (A.P.) – 533 255

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE RAMACHANDRAPURAM-533-255 (E.G.Dt.)

V. S. M. COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN 2015 - 16</u>

Department : Physics

CLASS: II B.Sc.(MPC)

PAPER: II - Thermodynamics and Optics

				the Lecturer	S.Sattibabu M.Sc.,	B.Ed.,							
			Name of	the Lecturer	CURRICU	LAR ACT	/ITY		co-currio	ULAR A	CTIVITY		
SERIAL NUMBER	H & WEEK	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
	MONTH	ноп										'EAR: 20)15-16
MON	TH: JUN	E						$\overline{}$					
1	3 RD WEEK	2	Remedial Coaching		Teaching Class	2	Yes						
2	4 TH WEEK	3	Remedial Coaching	1	Teaching Class	3	Yes				,	/EAR: 2	015-16
MON	TH: JUL	Y					·	1					
3	1 ST WEEK		Deduction of Maxwell's law of distribution of molecular speeds, Experimental verification Toothed wheel experiment. Transport Phenamin Viscosity, thermal conductivity and diffusion of gases. Concept and derivation of translation and syste matrices.		Teaching Class Assignment	2 1	Yes						
4	2 ND WEEK	4	position of the image planes and magnification of the optical system. Application of matrix methods to simple optical systems (1) thin lenses in contact (2) two thin lenses separated by distance.		Teaching Class	4	Yes		Ward Counseling		Yes		

5	3 RD WEEK	4	cardinal points of lens system, unit and nodal planes. Chromatic aberration in a lense, the achromatic doublet. Achromatism for two lenses in contact and separated by a distance – monochromatic in aberration.	:	Teaching Class Unit I	3	Yes	Book Reviews		Yes		
6	4 TH WEEK	4	The spherical aberration (longtitudinal spherical aberration) due to (1_a plane refracting surface and (2) a spherical surface (expressions without proof) Minimization of spherical aberrations – explanation of coma – astigmatism.		Teaching Class	4	Yes	Ward Counseling		Yes		
MON	NTH: AU	GUST								YEAR:	2014-1	5
7	I ST WEEK	3	Reversible and Irreversible process, Carnot's engine, efficiency.Carnot's theorem, Second law of thermodynamics, different statements Thermodynamic scale of temperature – Entropy		Teaching Class Assignment	2	Yes					
8	2 ND WEEK	3	Entropy and disorder measurement of entropy changes in reversible and irreversible process Entropy of universe – Entropy .		Teaching Class	3	Yes	Ward Counseling		Yes		
9	3 RD WEEK	4	Temperature diagrams, change of entropy of perfect gas-change of entropy when ice changes into steam. Thermodynamic Potentials – Derivation of Maxwell's thermodynamic relations.		Teaching Class Unit II	2	Yes	Group Discussion	1	Yes		
10	4 TH WEEK	4	specific heats- Derivations for ratio and difference of two specific heats For perfect gas.Joule – Kelvin effect expression for Joule-Kelvin coefficient for perfect and wanderwaal's gas.		Teaching Class	4	Yes	Ward Counseling		Yes		

MON	TH: SEP	TEMI	BER						١	YEAR: 20	15-16
11	1 ST WEEK	3	Spontaneous stimulated emission – laser principle.Population inversion – Einstein coefficients – Types of lasers, He-Ne and Ruby lasers and the application of lasers.	Teaching Class Assignment	2	Yes	Study Projects		Yes		
12	2 ND WEEK	4	Optical fiber types, rays and modes step and graded index fibers and their structure fiber materials, principles of fiber communication Basic principles of Holography. Gabor Hologram and its limitations applications of Hologram.	Teaching Class	4	Yes	Ward Counseling, Book Reviews		Yes		
13	3 RD WEEK	3	Polarized light – Brewsters law – Malus law – phenomenon of double refraction in calcite .Refraction of plane wave incident on a negative crystal like calcite .	Teaching Class Unit III	2	Yes	QUIZ	1	Yes		
14	4 TH WEEK	4	Nichol prism, Analysis of polarized light quarter wave plate, Babnet compensator. Optical activity Laurent's half shade polarimeter experiment. The superposition principle, coherence, temporal and spatial conditions for interference of light.	Teaching Class	4	Yes	Ward Counseling Seminars		Yes		
MO	NTH: OC	TOBE	CR CR							YEAR: 2)15-16
15	1 ST WEEK	3	Interference by division of wave front Fresnel's biprism – determinination of wavelength of light change of phase on reflection determination of thickness of a transparent material using prism.	Teaching Class	2	Yes	Ward Counseling, Class Room Seminars	1	Yes		

16	2 ND WEEK		Interference by division of amplitude – oblique incidence of a plane wave on a thn film (the cosine law)Colors of thin films – non reflecting thin films Liquefaction of gases using Joule-Kelvin effectPorous Plug experiment.		Teaching Class Unit IV	3	Yes	Ward Counseling		Yes		
17	3 RD WEEK	4	Distinction between Joule's expansion, Adiabatic expansion and Joule-Thompson's expansion expression for Joule-Kelvin cooling, liquefaction of Helium- Kapitza 's method, Adiabatic demagne-tization.		Teaching Class	4	Yes	Ward Counseling		Yes		
18	5 th WEEK	4	production of low temperatures principles of Refrigeration – Vapour compression type. Working of refrigerator and air conditioning machine. Effect of cloro fluro carbon on ozone layer.		Teaching Class	4	Yes					
MON	NTH: NO	VEMI	BER							· ·	YEAR: 20)15-16
			Applications of substances at low temp. Black body, Fery's black body, distribution of energy in the spectrum of a black body Wein's	1								
19	l ST WEEK	4	displacement law, Wien's law, Raleigh Jeans law – Quantum theory of radiation.		Teaching Class	3	Yes	Study Projects,Ward Counseling, Quiz	1	Yes		

21	3 RD WEEK		HALF-YEARLY EXAMINATIONS - 2015						Yes		
22	4 th WEEK		HALF-YEARLY EXAMINATIONS - 2015						Yes		
MON	TH: DE	СЕМВ	ER	1					 ١	/EAR: 2	015-16
23	l ST WEEK	4	Black Body Radiation, Rayleigh-Jean's formula.Planck's radiation law, Weins Displacement, Stefan's Boltzmann's law from Plancks formula.		Teaching Class	4	Yes				
24	2 ND WEEK	3	Application of Fermi-Dirac statistics to white dwarfs and Neutron stars interference by a plane parallel film illuminated by a point surface.		Teaching Class	3	Yes	Ward Counseling, Study Projects	Yes		
25	3 rd WEEK	4	Interference by film with two non parallel reflecting surfaces (wedge shaped film)determination of diameter of wire.Newton's rings in reflected and transmitted light, Determination of wavelength of monochromatic light Michelson Interferometer types of fringes		Teaching Class Unit V	3	Yes	Guest Lecture	Yes		
26	4 TH WEEK	3	determination of wavelength of monochromatic light, thickness of thin plane. Fraunhofer diffraction – diffraction due to a single slit and circular aperture. Limit of resolution two-slit Fraunhofer Fraunhofer diffraction pattern with N – Slits.		Teaching Class	4	Yes	Ward Counseling	Yes		

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27	sth WEEK	3	The Fourier transform and its properties the shifting theorem . application of the FT to Fourier diffraction due to single slit. The diffraction grating – normal and oblique incidence determination of wavelength of light	Teaching Class	2	Yes	Quiz	1	Yes		
MON	TH: JAN	IUAR	Y						١	/EAR: 20	015-16
28	l ST WEEK	3	Fresnel diffraction – Fresnel half period zones.zone plated – diffraction at a straight edge – diffraction of plane waves by a straight edge. A double slit and diffraction grating, diffraction.	Teaching Class	3	Yes	Guest Lecture,Study Project		Yes		
29	2 ND WEEK		PONGAL HOLIDAYS PRE- PUBLIC EXAMINATIONS								
30	3 RD WEEK	1	REVISION	Teaching Class	2	Yes					
31	4 TH WEEK	4	REVISION	 Teaching Class	3	Yes					
32	5 th WEEK	1	REVISION	Teaching Class			 				
MON	NTH: FEI	BRUA	RY				 	_	1	YEAR: 2	015-16
33	1 ST WEEK	4	REVISION	 Teaching Class	4	Yes	Group Discussion		Yes		
34	2 ND WEEK	3	REVISION	Teaching Class	3	Yes					
35	3 RD WEEK	2	REVISION	Teaching Class	2	Yes					

								1 1			
36	4 TH WEEK	2	REVISION	Teaching Class	2	Yes					
	<u> </u>						_		3	/EAR: 2	015-16
MON	TH: MA	RCH		 							
37	1 ST WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016								
38	2 ND WEEK	-	A.K.N.U. PRACTICAL EXAMINATIONS - 2016								

S.Satibur SIGNATURE OF THE LECTURER

にドニ SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

MSb., M.Phi., Ph.D.

Head Department of Physics

V.S.M. College - Ramachandrapuram

East Godavan Dt (A.P.) - 533 255

SIGNATURE OF THE PRINCIPAL PRINCIPAL V.S.M. COLLEGE RAMACHANDRAPURAM-533 255 (E.G.O).

V. S. M. COLLEGE: RAMACHANDRAPURAM CURRICULUM PLAN 2015 - 16

Department: Physics

PAPER: II - Thermodynamics and Optics

CLASS: II B.Sc.(MPCS)

Name of the Lecturer : S Sattibab

			Name of	the Lecturer	: S.Sattibabu M.Sc	.,B.Ed.,							
	WEEK	BLE			CURRIC	ULAR AC	TVITY		CO-CURR	ICULAR	ACTIVIT	Υ	
SERIAL	MONTH & W	HOURS AVAILABLE	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
МО	NTH: JUN	VE		1							,	YEAR: 2	015-16
1	3 RD WEEK	2	Remedial Coaching		Teaching Class	2	Yes			_	1		
2	4 TH WEEK	3	Remedial Coaching		Teaching Class	3	Yes						
MOI	NTH: JUL	Y		1							,	YEAR: 2	015-16
3	I ST WEEK	3	Deduction of Maxwell's law of distribution of molecular speeds, Experimental verification Toothed wheel experiment. Transport Phenamin Viscosity, thermal conductivity and diffusion of gases. Concept and derivation of translation and syste matrices.		Teaching Class Assignment	2	Yes						
4	2 ND WEEK	4	position of the image planes and magnification of the optical system. Application of matrix methods to simple optical systems (1) thin lenses in contact (2) two thin lenses separated by distance.	1	Teaching Class	4	Yes		Ward Counseling		Yes		

5	3 RD WEEK	4	cardinal points of lens system, unit and nodal planes. Chromatic aberration in a lense, the achromatic doublet. Achromatism for two lenses in contact and separated by a distance — monochromatic in aberration.	Teaching Class Unit I	3	Yes	Book Reviews		Yes		
6	4 TH WEEK	4	The spherical aberration (longtitudinal spherical aberration) due to (1_a plane refracting surface and (2) a spherical surface (expressions without proof) Minimization of spherical aberrations – explanation of coma – astigmatism.	Teaching Class	4	Yes	Ward Counseling		Yes		
MON	TH: AU	GUST							YEAR:	2014-1	5
7	l st WEEK	3	Reversible and Irreversible process, Carnot's engine, efficiency.Carnot's theorem, Second law of thermodynamics, different statements Thermodynamic scale of temperature – Entropy	Teaching Class Assignment	2	Yes					
8	2 ND WEEK	3	Entropy and disorder measurement of entropy changes in reversible and irreversible process Entropy of universe – Entropy.	Teaching Class	3	Yes	Ward Counseling		Yes		
9	3 RD WEEK	4	Temperature diagrams, change of entropy of perfect gas-change of entropy when ice changes into steam. Thermodynamic Potentials – Derivation of Maxwell's thermodynamic relations.	Teaching Class Unit II	2	Yes	Group Discussion	1	Yes		
10	4 TH WEEK		specific heats- Derivations for ratio and difference of two specific heats For perfect gas. Joule – Kelvin effect expression for Joule-Kelvin coefficient for perfect and wanderwaal's gas.	Teaching Class	4	Yes	Ward Counseling		Yes		

MOI	NTH: SEF	тем	BER				l.			,	YEAR: 2	015-16
11	l ST WEEK	3	Spontaneous stimulated emission – laser principle.Population inversion – Einstein coefficients – Types of lasers, He-Ne and Ruby lasers and the application of lasers.	Teaching Class Assignment	2	Yes		Study Projects		Yes		
12	2 ND WEEK	4	Optical fiber types, rays and modes step and graded index fibers and their structure fiber materials, principles of fiber communication Basic principles of Holography. Gabor Hologram and its limitations applications of Hologram.	Teaching Class	4	Yes		Ward Counseling, Book Reviews		Yes	i	
13	3 RD WEEK	3	Polarized light – Brewsters law – Malus law – phenomenon of double refraction in calcite .Refraction of plane wave incident on a negative crystal like calcite .	Teaching Class Unit III	2	Yes		QUIZ	1	Yes		
14	4 TH WEEK	4	Nichol prism, Analysis of polarized light quarter wave plate, Babnet compensator. Optical activity Laurent's half shade polarimeter experiment. The superposition principle, coherence, temporal and spatial conditions for interference of light.	Teaching Class	4	Yes		Ward Counseling Seminars		Yes		
MON	NTH: OC	ГОВЕ	R							`	EAR: 2	015-16
15	l ST WEEK	3	Interference by division of wave front Fresnel's biprism – determinination of wavelength of light change of phase on reflection determination of thickness of a transparent material using prism.	Teaching Class	2	Yes		Ward Counseling, Class Room Seminars	1	Yes		

16	2 ND WEEK	4	Interference by division of amplitude — oblique incidence of a plane wave on a thn film (the cosine law)Colors of thin films — non reflecting thin films Liquefaction of gases using Joule-Kelvin effectPorous Plug experiment.	Teaching Class Unit IV	3 1	Yes	Ward Counseling		Yes		
17	3 RD WEEK	4	Distinction between Joule's expansion, Adiabatic expansion and Joule-Thompson's expansion.expression for Joule-Kelvin cooling, liquefaction of Helium- Kapitza 's method, Adiabatic demagne-tization.	Teaching Class	4	Yes	Ward Counseling		Yes		
18	5 th WEEK	4	production of low temperatures principles of Refrigeration – Vapour compression type. Working of refrigerator and air conditioning machine. Effect of cloro fluro carbon on ozone layer.	Teaching Class	4	Yes					
MOI	TH: NO	VEME	BER			•	-		7	/EAR: 20	015-16
19	I ST WEEK	4	Applications of substances at low temp. Black body, Fery's black body, distribution of energy in the spectrum of a black body Wein's displacement law, Wien's law, Raleigh Jeans law – Quantum theory of radiation.	Teaching Class	3	Yes	Study Projects,Ward Counseling, Quiz	1	Yes		
				 i "							

21	3 RD WEEK		HALF-YEARLY EXAMINATIONS - 2015	1					Yes		
22	4 th WEEK		HALF-YEARLY EXAMINATIONS - 2015	1					Yes		
MON	NTH: DE	СЕМВ	BER						١	/EAR: 20	015-16
23	l ST WEEK	4	Black Body Radiation, Rayleigh-Jean's formula.Planck's radiation law, Weins Displacement, Stefan's Boltzmann's law from Plancks formula.		Teaching Class	4	Yes				
24	2 ND WEEK	3	Application of Fermi-Dirac statistics to white dwarfs and Neutron stars interference by a plane parallel film illuminated by a point surface.		Teaching Class	3	Yes	Ward Counseling, Study Projects	Yes		
25	3 rd WEEK	4	Interference by film with two non parallel reflecting surfaces (wedge shaped film)determination of diameter of wire.Newton's rings in reflected and transmitted light, Determination of wavelength of monochromatic light Michelson Interferometer types of fringes	1	Teaching Class Unit V	3	Yes	Guest Lecture	Yes		
26	4 TH WEEK	3	determination of wavelength of monochromatic light, thickness of thin plane. Fraunhofer diffraction – diffraction due to a single slit and circular aperture. Limit of resolution two-slit Fraunhofer Fraunhofer diffraction pattern with N – Slits.	1	Teaching Class	4	Yes	Ward Counseling	Yes		

27	sth WEEK		The Fourier transform and its properties the shifting theorem . application of the FT to Fourier diffraction due to single slit. The diffraction grating – normal and oblique incidence determination of wavelength of light		Teaching Class	2	Yes	Quiz	1	Yes		
MON	NTH: JAN	IUAR'	Y								YEAR: 2	015-16
28	1 ST WEEK	2	Fresnel diffraction – Fresnel half period zones.zone plated – diffraction at a straight edge – diffraction of plane waves by a straight edge. A double slit and diffraction grating, diffraction.		Teaching Class	3	Yes	 Guest Lecture,Study Project		Yes		
29	2 ND WEEK	-	PONGAL HOLIDAYS PRE- PUBLIC EXAMINATIONS									
30	3 RD WEEK	1	REVISION		Teaching Class	2	Yes					
31	4 TH WEEK	4	REVISION		Teaching Class	3	Yes					
32	5 th WEEK	1	REVISION	***	Teaching Class							
MON	NTH: FEE	BRUA	RY	1						3	YEAR: 2	015-16
33	l ST WEEK	4	REVISION		Teaching Class	4	Yes	Group Discussion		Yes		
34	2 ND WEEK	3	REVISION		Teaching Class	3	Yes					
35	3 RD WEEK	2	REVISION		Teaching Class	2	Yes					

36	4 TH WEEK	2	REVISION		Teaching Class	2	Yes				
MON	TH: MA	RCH			<u></u>			<u> </u>	 	EAR: 20	<u>015-16</u>
37	1 ST WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016								
38	2 ND WEEK		A.K.N.U. PRACTICAL EXAMINATIONS - 2016	D							

SSQ#ib SIGNATURE OF THE LECTURER 10.5-1-

SIGNATURE OF THE DEPARTMENT I/C

Dr. K. Srinivasa Rao

Mch., M.Phil., Ph.D.

Head Department of Physics

V.S.M. Coffege - Ramachandrapuram

East Godavan Dt (A.P.) - 533 255

SIGNATURE OF THE PRINCIPAL PRINCIPAL VS.M. COLLEGE RAMACHANDRAPURAM-533 255 (E.G.DL)

$\underline{\textbf{V.S.M.COLLEGE: RAMACHANDRAPURAM}}$

CURRICULUM PLAN - 2015 - 16

Department : Physics CLASS: I B.Sc. (MPC and MPCS) SEMISTER-I

PAPER: I -Mechanics and Properties of Matter

			7	lame of the Lectur	er : S.Sattibabu м.sc., в.	Ed.,							
	જ			U U	CURRICULAR	ACTVITY	<i>t</i>		CO-CURR	ICULAR		ΓY	S
SERIAL	MONTH 8 WEEK	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: JUL	Υ										YEAR:	2015-16
1	l ST WEEK	4	Scalar and vector fields, gradient of a scalar field and its physical significance. Divergence and curl of a vector field and related problems.		Teaching Class Assignment	3	Yes				Yes		·
2	2 ND WEEK	3	Vector integration, line, surface and volume integrals. Stokes theorem.		Teaching Class	3	Yes		Ward Counseling		Yes		
3	3 RD WEEK	3	Gauss and Greens theorems- simple applications. Fundamentals of vibrations, Damped and forced oscillations		Teaching Class	3	Yes		Book Reviews		Yes		
4	4 TH WEEK	3	Motion of variable mass system, motion of a rocket, multi-stage rocket. Collisions in two and three dimensions.		Teaching Class	3	Yes		Ward Counseling		Yes		
5	5 th WEEK	2	concept of impact parameter scattering cross-section. Rutherford scattering.Definition of Rigid body, rotational kinematic relations		Teaching Class Unit I	1	Yes		Guest Lecture, Class Room Seminars	1	Yes		
MON	TH: AU	GUST										YEAR:	2015-16
6	l ST WEEK		I MID Examinations								Yes		

7	2 ND WEEK	3	Equation of motion for a rotating body, angular momentum and inertial tensor. Eulers equation, precession of a top, Gyroscope.		Teaching Class	3	Yes	Ward Counseling		Yes		
8	3 RD WEEK	4	Mechanics of continuous media and Central Forces Classification of beams, types of bending, point load, distributed load		Teaching Class Unit II	2	Yes	Group Discussion	1	Yes		
9	4 TH WEEK	4	shearing force and bending moment. sign conventions simple supported beam carrying a concentrated load at mid span, cantilever with an end load.		Teaching Class	4	Yes	Ward Counseling	ļ	Yes		
MON	NTH: SEP	TEM	BER								YEAR:	2015-16
10	l ST WEEK	4	Central forces – definition and examples, conservative nature of central forces, conservative force as a negative gradient of potential energy	ı	Teaching Class Assignment	3	Yes	Study Projects		Yes		
11	2 ND WEEK	4	Equation of motion under a central force motion under inverse square law,	I	Teaching Class	3	Yes	Ward Counseling, Book Reviews	1	Yes		
12	3 RD WEEK	4	Derivation of Kepler's laws.		Teaching Class Unit III	2 1	Yes	QUIZ	1	Yes		
13	4 TH WEEK	3	Special theory of relativity, Galilean relativity, absolute frames,		Teaching Class	3	Yes	Ward Counseling Seminars		Yes		
14	5 th WEEK	2	Michelson-Morley experimentPostulates of special theory of relativity.	1	Teaching Class	1	Yes	Group Discussion	1	Yes		
MON	NTH: OC	ГОВЕ	iR								YEAR	: 2015-16
15	I ST WEEK	2,	II MID Examinations	1						Yes		

16	2 ND WEEK		Postulates of special theory of relativity. Lorentz transformation.	Teaching Class	1	Yes		Ward Counseling, Class Room Seminars	1	Yes		
17	3 RD WEEK	3	time dilation, length contraction, mass- energy relation.	Teaching Class Unit IV	2	Yes		Ward Counseling, Quiz		Yes		
18	5 th WEEK	2	REVISION						-		:	
MON	TH: NO	VEMB	ER								YEAR	2015-16
19	2 ND WEEK	3	REVISION				_					
20	3 RD WEEK	4	PRACTICAL EXAMINATIONS									
21	4 th WEEK	4	SEMESTER END EXAMINATIONS									

SIGNATURE OF THE LECTURER

SIGNATURE OF THE DEPARTMENT I/C

Dr. R. Srinivasa Rao

Head Department of Physics

V.S.M. Collège - Ramachandrapuram

a.t Godavan Dt. (A.P.) = 533 255

S. Mangaryand

SIGNATURE OF THE PRINCIPAL

PRINCIPAL, V.S.M. COLLEGE RAMACHANDRAPURAM-833 255 (E.G.DL)

V.S.M.COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN - 2015 - 16</u>

Department : Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

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SERIAL		HOURS		INPUTS / VALUES ADDITION	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MO	NTH: DE	CEMI					. - 0	_ <			> 5		
1	l st WEEK	3	Simple harmonic oscillator, and solution of the differential equation- Physical . characteristics of SHM		Teaching Class	3	Yes			,		YEAR	: 2015-
2	2 ND WEEK	4	torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g', combination of two mutually perpendicular simple harmonic		Teaching Class	4	Yes		Ward Counseling,		Yes		
3	3 rd WEEK	4	Lissajous figures, Damped harmonic oscillator, solution of the differential equation of damped oscillator.		Teaching Class Unit V	2 1	Yes		Guest Lecture	1	Yes		
4	4th WEEK	2	Energy considerations.Relaxation time quality factor	I	Teaching Class	2	Yes		Ward Counseling		Yes		
5	5 th WEEK	2	differential equation of forced oscillator and its solution, logarithmic decrement.		Teaching Class	2	Yes						
ON	TH: JAN	JARY											
6	1 ST WEEK	3 a	Complex vibrations Fourier theorem and evaluation of the Fourier oefficients.	1	eaching Class	2	Yes		Guest Lecture.	1	Yes	YEAR: 2	015-16

7	2 ND WEEK		I MID Examinations							Yes	5	
8	3 RD WEEK	2	Analysis of periodic wave functions- square wave, triangular wave.Longitudinal vibrations in bars.	Teaching Class	2	Yes		Study Projects		Yes		
9	4 TH WEEK	3	wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar fixed at one	Teaching Class	3	Yes	-			-		
10	5 th WEEK	1	Transverse wave propagation along a stretched string.	Teaching Class	1		-	-	-			
MON	TH: FEE	BRUA	RY									
11	l ST WEEK	2	General solution of wave equation and its significance.	Teaching Class	2	Yes					YEAR:	2015-
12	2 ND WEEK	2	General solution of wave equation and its significance.	Teaching Class	1	Yes		Quiz	1	Yes		
13	3 RD WEEK	3	Modes of vibration of stretched string clamped at both ends, Overtones,			Yes		 	-		\dashv	
14 1	4 TH WEEK	2	energy transport, transverse impedance.			Yes						
ONT	H: MAR	СН										
5 V	I ST VEEK		II MID Examinations							T	YEAR: 2	015-16
n 1	2 ND VEEK	_	Ultrasonics Ultrasonics, properties of ultrasonic	Teaching Class	2	Yes		Group		Yes		

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17	3 RD WEEK	3	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.	Teaching Class	3	Yes					
18	4 TH WEEK		Noise Pollution – origin, effect on the environment - prevention	Teaching Class	2	Yes	Study Project	-	Yes		
MOI	TH: APR	IIL_					 		<u></u>	<u></u>	<u> </u>
19	l ST WEEK		REVISION							YEAR	: 2015-16
20	2 ND WEEK		PRACTICAL EXAMINATIONS								
21	3 RD WEEK		SEMESTER END EXAMINATIONS								
22	4 TH WEEK		SEMESTER END EXAMINATIONS								3

S-B-HSL SIGNATURE OF THE LECTURER

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Dr. K. Srinivasa Rao

Mich. MPNL PLD.
Head Depertment of Physics
V.S.M. College - Ramachandrapuram
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SIGNATURE OF THE PRINCIPAL

PRINCIPAL, VS.M. COLLEGE RAMACHANDRAPURAM-533 255 (E.G.DL)

V.S.M.COLLEGE: RAMACHANDRAPURAM <u>CURRICULUM PLAN - 2015 - 16</u>

Department : Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-I

PAPER: I -Mechanics and Properties of Matter

			Nan	ne of the Lecturer :	M.Bhimeswara Redd	y M.Sc.							
	al l	112			CURRICULAR	ACTVIT	Υ		CO-CURR	ICULAR	ACTIVI		S.
SERIAL	MONTH &	HOURS	SYLLABUS TOPICS	ADDITIONAL INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	ACTIVITY	HOURS	WHETHER CONDUCTED	IF NOT, ALTERNATE DATE	REMARKS
MON	TH: JUL	Y										YEAR	2015-16
1	l ST WEEK	4	Scalar and vector fields, gradient of a scalar field and its physical significance. Divergence and curl of a vector field and related problems.		Teaching Class Assignment	3 1	Yes				Yes		
2	2 ND WEEK	3	Vector integration, line, surface and volume integrals. Stokes theorem.		Teaching Class	3	Yes		Ward Counseling		Yes		
3	3 RD WEEK	3	Gauss and Greens theorems- simple applications. Fundamentals of vibrations, Damped and forced oscillations		Teaching Class	3	Yes		Book Reviews		Yes		
4	4 TH WEEK	4	Motion of variable mass system, motion of a rocket, multi-stage rocket. Collisions in two and three dimensions.		Teaching Class	4	Yes		Ward Counseling		Yes		
5	5 th WEEK	2	concept of impact parameter scattering cross-section. Rutherford scattering.Definition of Rigid body, rotational kinematic relations		Teaching Class Unit I	1 1	Yes		Guest Lecture, Class Room Seminars	1	Yes		
MON	TH: AU	GUST										YEAR	2015-16
6	l ST WEEK		I MID Examinations								Yes		

9 MON	4 TH WEEK NTH: SEP	4 PTEM	shearing force and bending moment. sign conventions simple supported beam carrying a concentrated load at mid span, cantilever with an end load. BER		Teaching Class	4	Yes		Ward Counseling		Yes	YEAR:	2015-16
10	1 ST WEEK	4	Central forces – definition and examples, conservative nature of central forces, conservative force as a negative gradient of potential energy		Teaching Class Assignment	3 1	Yes		Study Projects		Yes		
11	2 ND WEEK	4	Equation of motion under a central force motion under inverse square law,		Teaching Class	3	Yes	:	Ward Counseling, Book Reviews	1	Yes		
12	3 RD WEEK	4	Derivation of Kepler's laws.		Teaching Class Unit III	2	Yes		QUIZ	1	Yes		
13	4 TH WEEK	3	Special theory of relativity, Galilean relativity, absolute frames,		Teaching Class	3	Yes		Ward Counseling Seminars		Yes		
14	5 th WEEK	2	Michelson-Morley experimentPostulates of special theory of relativity.		Teaching Class	1	Yes		Group Discussion	1	Yes		
	MONTH: OCTOBER YEAR: 2015-16												
MON	NTH: OC	TOBE	ER .							7			_

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16	2 ND WEEK	2	Lorentz transformation.	Teaching Class	1	Yes	 Counseling, Class Room Seminars	Yes		
17	3 RD WEEK	3	time dilation, length contraction, mass- energy relation.	Teaching Class Unit IV	2	Yes	Ward Counseling, Quiz	Yes		
18	5 th WEEK	2	REVISION							
MON	TH: NO	VEMB	ER				 	 	YEAR	: 2015-16
19	2 ND WEEK	3	REVISION			<u> </u>		_		
20	3 RD WEEK	4	PRACTICAL EXAMINATIONS							
21	4 th WEEK	4	SEMESTER END EXAMINATIONS			[

SIGNATURE OF THE LECTURER

Postulates of special theory of relativity.

SIGNATURE OF THE DEPARTMENT I/C Dr. K. Srintvasa Rao

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Mab: MPML Ph.D. Head Department of Physics V.S.M. College - Ramachandrapuram Jr. Godavan Dt. (A.P.) - 533 000

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PRINCIPAL, V.S.M. COLLEGE

Ward

RAMACHANDRAPURAM-833 256 (E.G.DL)

V.S.M.COLLEGE: RAMACHANDRAPURAM CURRICULUM PLAN - 2015 - 16

Department: Physics

CLASS: I B.Sc. (MPC and MPCS) SEMISTER-II

PAPER: Waves & Oscillations

		,	N:	ame of the Le	cturer : M.Bhimeswara Rec	ldy M.	Sc.,				-		
ا ا	थ			ADDITIONAL	CURRICULAR AC				CO-CURRICULAR ACTIVITY				Y
SERIAL	MONTH	HOURS	SYLLABUS TOPICS	INPUTS / VALUES ADDITION	ACTIVITY	HOURS ALLOTTED	WHETHER	IF NOT, ALTERNATE DATE	АСТІИІТУ	HOURS	WHETHER	IF NOT, ALTERNATE DATE	REMARKS
MO	ONTH: DECEMBER											: 2015-16	
1	l ST WEEK	3	Simple harmonic oscillator, and solution of the differential equation—Physical . characteristics of SHM		Teaching Class	3	Yes					ILAK	. 2013-1
2	2 ND WEEK	4	torsion pendulum. measurements of rigidity modulus, compound pendulum, measurement of 'g', combination of two mutually perpendicular simple harmonic		Teaching Class	4	Yes		Ward Counseling,		Yes		
3	3 rd WEEK	4	Lissajous figures, Damped harmonic oscillator, solution of the differential equation of damped oscillator.		Teaching Class Unit V	2	Yes		Guest Lecture	1	Yes		
4	4th WEEK	2	Energy considerations.Relaxation time quality factor		Teaching Class	2	Yes		Ward Counseling		Yes		
5	5 th WEEK	2	differential equation of forced oscillator and its solution. logarithmic decrement.		Teaching Class	2	Yes						
MON	TH: JAN	UARY	·									YEAR:	2016 16
6	l ST WEEK		Complex vibrations Fourier theorem and evaluation of the Fourier coefficients.		Teaching Class	2	Yes		Guest Lecture,	1	Yes	I EAR,	2013-10

	Т —	_											
7	2 ND WEEK		I MID Examinations								Yes		
8	3 RD WEEK	2	Analysis of periodic wave functions- square wave, triangular wave.Longitudinal vibrations in bars.		Teaching Class	2	Yes	校	Study Projects		Yes		
9	4 TH WEEK	3	wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar fixed at one		Teaching Class	3	Yes						
10	5 th WEEK	1	Transverse wave propagation along a stretched string.		Teaching Class	1							
MON	MONTH: FEBRUARY							YEAR	2015-16				
11	1 ST WEEK	2	General solution of wave equation and its significance.	Į.	Teaching Class	2	Yes						
12	2 ND WEEK	2	General solution of wave equation and its significance.		Teaching Class	1	Yes		Quiz	1	Yes		
13	3 RD WEEK		Modes of vibration of stretched string clamped at both ends,Overtones,				Yes						
14	4 TH WEEK	2	energy transport, transverse impedance.				Yes						
MON	TH: MAF	СН										YEAR:	2015-16
15	l ST WEEK		II MID Examinations	П							Yes		
16	2 ND WEEK		Ultrasonics Ultrasonics, properties of ultrasonic		Teaching Class	2	Yes		Group Discussion		Yes		

17	3 RD WEEK	3	production of ultrasonics by piezoelectric and magnetostriction methods Detection of ultrasonics, Applications of ultrasonic waves.	Teaching Class	3	Yes				
18	4 TH WEEK	2	Noise Pollution – origin, effect on the environment - prevention	Teaching Class	2	Yes	Study Project	Y	es	
MOI	TH: API	RIL			'				YI	EAR: 2015-16
19	l ST WEEK		REVISION							
20	2 ND WEEK		PRACTICAL EXAMINATIONS							
21	3 RD WEEK		SEMESTER END EXAMINATIONS							
22	4 TH WEEK		SEMESTER END EXAMINATIONS							

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M.St., M Phil, Ph.D.

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