HONOUR	NUMBER	JULY-SEPTEMBER	OCTOBER –	HONOUR	NUMBER	JANUARY-MARCH	APRIL-JUNE
S	OF	7 weeks	DECEMBER	S	OF	5.5 weeks	7.5 weeks
(CBCS	LECTURE		5 weeks	(CBCS	LECTURE		
Syllabus)	S			Syllabus)	S		
		MATHEMATICAL	MATHEMATIC	Semester-II	THEORY	ELECTRICITY AND	ELECTRICITY AND
Semester-I	THEORY	PHYSICS – I	AL PHYSICS –	C -3	13 weeks	MAGNETISM	MAGNETISM
C -I	12 weeks	Calculus, Vector	I				
		Calculus	Calculus, Vector		Credit: 4	NO. OF CLASSES= 22	NO. OF CLASSES=
	Credit: 4	NO. OF CLASSES= 28	Calculus,				30
			Probability				
			NO. OF				
			CLASSES= 20				
Semester –		MECHANICS	MECHANICS	Semester-II	THEORY	WAVES AND OPTICS	WAVES AND
I	THEORY			C -4			OPTICS
C-2	12 weeks	NO. OF CLASSES=28	NO. OF		13 weeks	NO. OF CLASSES= 22	
			CLASSES=20				NO. OF CLASSES=
	Credit: 4				Credit: 4		30
Semester –		MATHEMETICAL	MATHEMETIC	Semester –	PRACTIC	1.To determine an	6.To study the
I	PRACTIC	PHYSICS LAB using	AL PHYSICS	II	AL	unknown Low	response curve of a
P-I	AL	PYTHON	LAB using	P-3	13 weeks	Resistance using Carey	parallel LCR circuit
			PYTHON			Foster's Bridge.	and determine its (a)
	G 11. 6	NO. OF. CLASSES= 28	NO 0E		G 11. 6	0.55	Anti- resonant
	Credit:2	(subject to the arrival	NO. OF.		Credit: 2	2. To verify the	frequency and (b)
		of new computer with	CLASSES= 20			Thevenin and Norton	Quality factor Q.
		given specifications)	(subject to the			theorems.	
			arrival of new			3. To verify the	7.75 4 4 45
			computer with			Superposition and	7.To study the
			given			Maximum power transfer theorems.	characteristics of a series RC Circuit.
			specifications)			4. To determine self-	of a series RC Circuit.
						inductance of a coil by	8.To determine an
						Anderson's bridge.	unknown
						5. To study response	Low Resistance using
						curve of a Series LCR	Potentiometer.
						circuit and determine its	i otentionicter.
						(a) Resonant frequency,	
						(b) Impedance at	9. <b>To determine the</b>
						resonance, (c) Quality	resistance of a
						resonance, (c) Quality	i esistance ui a

						factor Q, and (d) Band width.	galvanometer using Thomson's method. (subject to arrival of the instrument)  10.Measurement of field strength B and its variation in a solenoid (determine dB/dx) (subject to arrival of the instrument)
Semester –	PRACTIC	1. YOUNG'S	8. To	Semester –	PRACTIC		
I	AL	MODULUS	determi	I	AL	To determine the	To study Lissajous
P-II		2. MOMENT OF	ne the	P-4	13 weeks	frequency of an	Figures
	G 11. 6	INERTIA	elastic			electric tuning fork by	to derermine the phase
	Credit: 2	3. COEFFICIENT	Constan		G 11: 0	Melde's experiment	difference between
		OF VISCOSITY	ts of a		Credit: 2	and verify λ2 –T law.	two harmonic oscillatiions.
			wire by Searle's			(Subject to arrival of	narmonic oscillations.
		4. MODULUS OF RIGIDITY	method			the instrument)	
		RIGIDITY	metnoa			2. To determine	
		5. TO STUDY				refractive index of the	8. To determine the
		RANDOM	9. To			Material of a prism	thickness of a thin
		ERROR	determi			using sodium source.	paper by measuring
			ne the			5000000	the width of the
			value of			3. To determine the	interference fringes
		6. TO	g using			dispersive power and	produced by a
		DETERMINE	Bar			Cauchy constants of the	wedge-shaped
		'g'AND	Pendulu			material of a prism	Film. (Subject to
		VELOCITY OF	m.			using mercury source.	arrival
		A FREELY				(subject to the arrival	of theInstrument)
		FALLING				of Hg source)	
		BODY BY	10. To				
		DIGITAL	determi			4. To determine	
		TIME	ne the			wavelength of sodium	9. Familiarization

		TECHNIQUE	value of			light using Fresnel	with:
		TECHNIQUE	g using			Biprism.	Schuster`s focusing;
			Kater's			Diprisiii.	determination of angle
		7. TO	Pendulu			5. To determine	of
		DETERMINE	m rendulu			wavelength of sodium	prism.
		HEIGHT OF A	111			light using Newton's	prisiii.
		BUILDING				Rings.	
		USING	11. To			Kings.	10. To determine
		SEXTANT				6. To determine	
		SEXTANT	study				wavelength
			the			dispersive power and	of (1) Na source and
			Motion			resolving power of a	(2) spectral lines of
			of			plane diffraction	Hg
			Spring			grating.	source using plane
			and				diffraction grating.
			calculat			No of dividing	( subject to arrival of
			e, (a)			NO. OF CLASSES =	the
			Spring			22	Hg. source)
		NO. OF CLASSES=28	constant				
			, (b) g				
			and (c)				11.To investigate the
			Modulu				motion of coupled
			s of				oscillators.
			rigidity.				(Subject to arrival
							of theInstrument)
			NO OF				
			NO. OF				1000
			CLASSES=20				12.To determine the
							wavelength of sodium
							source using
							Michelson's
							interferometer.
							(Subject to arrival
							of theInstrument)
							NO OF GLAGGES
							NO. OF. CLASSES =
							30
Semester-	THEORY	Mathematical Physics	Mathematical	Semester-	THEORY	Mathematical Physics	Mathematical
III	12 weeks	II	Physics II	IV	13 weeks	III	Physics III
C -5	12 WOOKS		i ilysics ii	C -8	15 WOORS		I Hysics III
C -3	i .			C -0			

	Credit: 4	Fourier Series, Frobenues Methods and Special functions No. of Classes:28  (Subject to the arrival of New computers)	Some Special integrals, Variational Calculus in Physics, Analytical Dynamics, Partial Differential equations No. of Classes:20		Credit: 4	Complex analysis, Integral transform  No. of Classes:22  (Subject to the arrival of New Computers)	Boundary value problems, matrices, Eigen value and Eigen vectors No. of Classes:30
Semester- III C -6	THEORY 12 weeks Credit: 4	Thermal Physics  Introduction to thermodynamics, Thermodynamic potentials  No. of Classes:28	Thermal Physics  Thermodynamic potentials, Kinetic theory of gases No. of Classes:20	Semester- IV C -9	THEORY 13 weeks Credit: 4	Elements of Modern Physics Relativistic dynamics, Collection of identical entities No. of Classes:22	Elements of Modern Physics Emergence of Quantum Mechanics, Lasers, Nuclear Physics No. of Classes:30
Semester- III C -7	THEORY 12 weeks Credit: 4	Digital Systems and Applications Introduction,Integrated Circiuts, Digital Circuits, Arithmatic circuits, Data processing circuits No. of Classes:28	Digital Systems and Applications  Sequential circuits, Timers, Registers, Counters, Computer Organization  No. of Classes:20	Semester- IV C -10	THEORY 13 weeks Credit: 4	Analog Systems and Applications History of the development of Electronics, Semiconduc tor diodes, Two terminal devices, BJT No. of Classes:22	Analog Systems and Applications FET, Amplifiers, Oscillators, OPAMP. Application of OPAMP, Conversion No. of Classes:30
Semester- III	Theory + lab (Mixed) 12 weeks	Basic Instrumentation Skills Basic of Instruments,	Basic Instrumentatio n Skills	Semester- IV	Theory + lab (Mixed) 13 weeks	Computational Physics	Computational Physics

Skilled Enhanceme nt Course - I	Credit: 2	Electronic Voltmeter, Cathode Ray Oscilloscope, Signal generators and analysis instruments No. of Classes:14	Impedance bridges and Q meters. Digital Instruments, Digital multimeters  No. of Classes:10	Skilled Enhanceme nt Course - II	Credit: 2	Introduction, Scientific programming, Control Statements  No. of Classes:12	Programming  No. of Classes:16
Semester III P5	Practical Credit: 2	Mathematical Physics II Lab General topics, Sorting, statistical Calculation, Interpolation, Numerical Differentiation No. of Classes: 28	Mathematical Physics II Lab Numerical integration, Integration by Stochastic method,Solution of ODE first order differential equation No. of Classes: 20	Semester IV P8	Practical Credit:2	Mathematical Physics III Lab  ODE initial value problem, Solution of Linear System of equations,Inverse of a matrix, Orthogonalization method,Eigenvalue calculation,Eigen Vectors No. of Classes: 22	Mathematical Physics III Lab  Boundary value problems, Newton Raphson method, Integral transform, Dirac Delta function, Introduction of OCTAVE and its use  No. of Classes: 32
Semester III P6	Practical Credit: 2	1. Stefan's law 2. Thermal Conductivity of Bad conductor by Lee's method 3. Temperature coefficient of resistance of PRT using constant current source (subject to the arrival of the instrument)	Thermal Physics Lab  6.To calibrate a thermocouple to measure temperature in a specified range using OPAMP (subject to the arrival of the instrument)  7.Measuring Unknown temperature using Diode	Semester IV P9	Practical Credit:2	Elements of Modern Physics lab  1. Wavelenth of Hα emission of Hydrogen atom 2. Absorption ines of Iodine vapour 3. Value of e/m by bar magnet 4. Wavelength of laser source by diffraction of double slits 5. Wavelenth and	Elements of Modern Physics lab 8. Planck's Constant using blackbody radiation and photo detector 9. Photoelectric Effect 10. Planck's constant using 4 LEDs of different colours 11. Ionization

Semester	Practical	4. To study thermo emf of a thermocouple 5. To calibrate a thermocouple to measure temperature in a specified range using potentiometer No. of Classes: 28  (subject to the arrival of the Instrument)	8.To determine mechanical equivalent of heat (subject to the arrival of the Instrument)  9. Coefficient of thermal conductivity by Searle's apparatus (subject to the arrival of the Instrument)  10. Coefficient of thermal conductivity by Angstorm's method  No. of Classes: 20  (subject to the arrival of the Instrument)	Semester	Practical	anguar spread of solid state laser by plane diffraction grating 6. Work function of the material of filament by directly heated diode 7. Tunneling effect in tunnel diode by IV characteristics  No. of Classes: 22 (subject to the arrival of the instruments)	potential of mercury  12. Millican's Oil drop experiment  13. Wavelengt oflaser source using diffraction of single slit  No. of Clases: 30  (subject to the arrival of the instruments)
III	Credit:2	Applications lab	and	IV	Credit: 2	Applications lab	Applications lab
P7			Applications lab	P10			
		1. Use of CRO	6.Different types			1. I-V	10. To add DC
		2. Use of	of Adders			characteristics	voltage using
1		Z. USE OI					

2 NOT	0. 4.4.1.1		11 . 1 1		*
3. NOT gate using	8. Astable		diode and		inverting and
transistor	Multivibrator		Light emitting		in
4. Use of	and Monostable		diode using		noninverting
Universal gate	Multivibrator		both votage		mode
5. For a given	using 555 timer		and current	11.	OPAP as
truth table find	9. Subtractor		source		integrator and
the equation	10. JK Master	2.	To study Zener		differentiator
and develop the	Slave flipflops		diode	12.	To Study CE
circuit	11. Counters	3.	V-I and power		transistor
	12. Shift		curves of Solar		amplifier
No. of Classes: 28	Registors		Cell	13.	Various
		4.	Characteristics		biasing
	No. of Classes:		of BJT in CE		configuration
	20		configuration		of BJT for
		5.	To Study RC		normal Class
			coupled		A operation
			Oscillator	14.	To study
		6.	Inverting,		Phase shift
			Noninvering		Oscillator
			and buffer		and Colpitt's
			amplifier using		Oscillator
			OPAMP	15	To design
		7.	Wien bridge	10.	DAC and
		, ,	oscillator		ADC
		8.	To deign a	16	Precision
		0.	circuit to	10.	differential
			simulate 1 <sup>st</sup>		amplifier
			and 2 <sup>nd</sup> order	17	To Study
			differential	17.	zero crossing
			equation		detector and
		9.	To study		comparator
		7.	inverting and	10	To study
			non inverting	10.	Schmitt
			amplifier using		trigger and
			OPAMP and		associated
			study its		circuits
			frequency		Nf
			response		No. of
			No. of Classes:		Classes:30
			22		

HONOURS	NUMBER OF	JULY-SEPTEMBER	OCTOBER -DECEMBER	JANUARY-MARCH		APRIL-	
	LECTURES					JUNE	
			UNIT VB, GROUP D	UNIT VB, GROUP E			
PART -III	THEORY	UNIT VB, GROUP D	QUANTUM	SPECTROSCOPY			TUTORIAL
PAPER -V		QUANTUM	MECHANICS	NO. OF CLASSES=			
		MECHANICS	NO. OF CLASSES= 18	6			
		NO. OF CLASSES= 21					AND
				UNIT VA, GROUP A			
				CLASSICAL			
				MECHANICS			UNIVERSITY FINAL
				NO. OF CLASSES=			EXAMINATION
				20	Z		
		UNIT VA, GROUP B	UNIT VB, GROUP E		TEST EXAMINATION		
		SPECIAL THEORY OF	SPECTROSCOPY		[A]		
		RELATIVITY	NO. OF CLASSES= 10				
		NO. OF CLASSES= 14			AN		
		UNIT VA, GROUP C			EX		
		STATISTICAL PHYSICS			T		
		NO. OF CLASSES= 14	INVENTE CROVE		ES		
			UNIT VB, GROUP E		I		
DADE III	THEODY	Thurshy Choup v	X-Ray= 5	TIME VID. CDOUD			
PART -III	THEORY	UNIT VIA, GROUP A	UNIT VIA, GROUP A	UNIT VIB, GROUP			
PAPER -VI		NUCLEAR PHYSICS NO. OF CLASSES=28	NUCLEAR PHYSICS NO. OF CLASSES=20	C SOLID STATE			
		NO. OF CLASSES=28	NO. OF CLASSES=20	PHYSICS			
				NO. OF CLASSES=			
				18			
		UNIT VIA, GROUP D	UNIT VIA, GROUP B	10	-		
		LASER AND FIBRE	INSTRUMENTAL				
		OPTICS NO. OF	METHOD NO. OF				
		CLASSES= 7	CLASSES=5				
PART -III	THEORY		UNIT VIIA	UNIT VIIA			
PAPER -			ELECTRONICS	ELECTRONICS			
VIIA			NO. OF CLASSES= 12	NO. OF CLASSES=			
				12			
PART -III		COMPUTER	COMPUTER	COMPUTER			
PAPER -	Practical	PROGRAMMING	PROGRAMMING	PROGRAMMING			
VIIB		NO. OF CLASSES= 14	NO. OF CLASSES= 16	NO. OF CLASSES=			
				10			

HONOURS	NUMBER OF	JULY-SEPTEMBER	OCTOBER -DECEMBER	JANUARY-		APRIL-	
	LECTURES			MARCH		JUNE	
	Practical	BIPRISM	B-H LOOP(SUBJECT TO	BAND GAP			
PART -III		POLAROID	ARRIVAL OF THE	CROSSED			
PAPER -		GRATING	INSTRUENT)	GRATING			
VIIIA				NO. OF	Z		
		NO. OF	ANDERSON BRIDGE	CLASSES= 10	TION		
		CLASSES=14			<.		UNIVERSITY FINAL
			FOURIER SPECTRUM		MIN,		EXAMINATION
			NO. OF CLASSES=14		\_X		
					X		
PART -III		VOLTAGE	TRANSISTOR	REGULATED	ΤE		
PAPER -		AMPLIFIER	CHARACTERISTICS	POWER SUPPLY	TEST		
VIIIB		WIEN BRIDGE	OP-AMP	H Parameters	Ξ		
		OSCILLATOR	BOOLEAN EXPRESSION	NO. OF CLASSES			
		TEMPERATURE		=10			
		CONTROLLER	NO. OF CLASSES=14				
		NO. OF					
		CLASSES=14					

# DEPARTMENT OF PHYSICS (GENERAL)

Semester I	Theory	JULY-SEPTEMBER	OCTOBER –DECEMBER	Semester II		JANUARY-MARCH	APRIL-
	Credit: 4	7 weeks	5 weeks			5.5 weeks	JUNE
		Particle Dynamics	Particle Dynamics			Vector Analysis	7.5 weeks
		STR	STR			Electrostatics	Linear
		Mathematical methods	Oscillations			Electromegnetic Induction	Network
		Elasticity	Gravitation			_	Maxwells
			NO. OF Classes $= 20$			NO. OF CLASS = $30$	Equations
					<b>^</b> 4		Wave
		NO. OF Classes $= 28$			Theory Credit: 4		Propagation
					The Tec		Magnetic
							Induction
							NO. OF
							CLASSES=
							22

		I			l		
Semester I	PRACTI	1Modulus of rigidity				1. To determine an	6.To study
	CAL		6.To determine the height			unknown Low	the response
		2.Moment of Inertia	of a building using a	Semester II		Resistance using	curve of a
	Credit: 2		Sextant.	Practical		Carey Foster's	parallel LCR
		3.Coefficient of		Credit: 2		Bridge.	circuit and
		Viscosity	7. To determine the elastic				determine its
			Constants of a wire by			<b>2.</b> To verify the	(a) Anti-
		4.Young's Modulus	Searle's method.			Thevenin and	resonant
		5 m . 1 .1 . 1				Norton theorems.	frequency
		5.To study the random error in observations of	8.To determine the value of			2 The confer than	and (b)
		time period of some	g using Bar Pendulum.			3. To verify the Superposition	Quality
		oscillation using	9. To determine the value			and Maximum	factor Q.
		chronometer.	of g using Kater's			power transfer	7. To study
		cinonometer.	Pendulum.			theorems.	the
			T Officialist.			theorems.	characteristi
			10. To study the Motion of			4. To determine	cs of a series
		NO. OF CLASSES=28	Spring and calculate, (a)			self-inductance of	RC Circuit.
			Spring constant, (b) g and			a coil by	8. To
			(c) Modulus of rigidity			Anderson's	determine an
						bridge.	unknown
			NO. OF CLASSES=20				Low
						5. To study response	Resistance
						curve of a Series	using
						LCR circuit and	Potentiomete
						determine its (a) Resonant	r.
						frequency, (b)	9. To
						Impedance at resonance	determine
						, (c) Quality factor Q,	the
						and (d) Band width.	resistance of
							a
							galvanomete
						No. of Classes = 22	r using
							Thomson's
							method.

							10. Measuremen t of field strength B and its variation in a solenoid (determine dB/dx)  NO. OF CLASS = 30
Semester	THEORY	Thermal Physics and	Thermal Physics and	Semester IV	THEOR	Waves and Optics	Waves and
III	Credit: 4	Statistical Mechanics	Statistical Mechanics		Y	Superposition of two collinear	<b>Optics</b> Wave
		Laws of	Theory of Radiation		Credit: 4	harmonic	motion
		Thermodynamics,				oscillations,	general,
		Thermodynamic	Statistical Mechanics			Superposition of two	Fluids,
		potentials, Kinetic				perpendicular harmonic	Sounds,
		theory of gases	No. of Classes: 20			oscillations,	Wave
		No. of Classes: 28				Interference Michelson Interferometer	Optics,
		No. of Classes: 28				No. of Classes: 22	Diffraction, Polarization
						No. of Classes: 22	Polarization
Semester	PRACTI	Thermal Physics and	Thermal Physics and		PRACTI	Waves and Optics Lab	Waves and
III	CAL	Statistical Lab	Statistical Lab	Semester IV	CAL	1.To determine the	Optics Lab
	Credit: 2					frequency of an electric	7.To
		<ol> <li>Verification of</li> </ol>	7. Measurement of un		Credit: 2	tuning fork by Melde's	determine
		Stefan's Law	temperature using Diode			experiment and verify	dispersive
		using a torch	sensor.			$\lambda 2$ –T law.	power and
		bulb 2. To determine	8. To determine Mech			2. To determine	resolving
		the Coefficient	Equivalent of Heat, J, by Callender and Barne's			oefficient of Viscosity of water by Capillary Flow	power of a plane
		of Thermal	constant flow method.			Method (Poiseuille's	diffraction
		Conductivity	constant now memou.			method).	grating.
		of a bad	9. To determine the				<b>8.</b> To
		conductor by	Coefficient of Thermal			3. To determine refractive	determine
		Lee and	Conductivity of Cu by			index of the Material of a	the thickness

Charlton's disc	Searle's Apparatus.	1	prism using sodium	of a thin
method.	Seatte's Apparatus.			
memod.	<b>10.</b> To determine the		source.	paper by measuring
3. To determine	Coefficient of Thermal		4.To determine the	the width of
the	Conductivity of Cu by		dispersive power and	the
Temperature	Angstrom's Method.		Cauchy constants of the	interference
Coefficient of	Aligstrolli s Method.		material of a prism using	fringes
Resistance by			mercury source.	produced by
Platinum			mercury source.	a wedge-
Resistance	No. of Classes: 20		5.To determine wavelength	
Thermometer	No. 01 Classes, 20		of sodium light using	9.
				9. Familiarizati
(PRT).using constant			Fresnel Biprism.	on with:
current source			6.To determine	Schuster's
(Subject to the arrival			wavelength of sodium	focusing; determinatio
of the instrument)			light using Newton's Rings.	
4 To study the verifican			Kings.	n of angle of
4.To study the variation of Thermo-Emf of a				prism. <b>10.</b> To
Thermocouple with			No. of Classes: 22	determine
Difference of			No. of Classes, 22	wavelength
Temperature of its Two				of (1) Na
Junctions.				source and
Junetions.				(2) spectral
6. To calibrate a				lines of Hg
thermocouple				source using
to measure				plane
temperature in				diffraction
a specified				grating.
Range by Null				<b>11.</b> To
Method using				investigate
a a				the motion
potentiometer.				of coupled
potentionieter.				oscillators.
No. of Classes:				<b>12.</b> To
28				determine
				the
				wavelength
				of sodium
				source using
I		1		

			Michelson's interferomet
			er.
			(Subject to the arrival
			of the
			Instruments
			No. of
			Classes: 30

GENERAL	NUMBER OF	JULY-SEPTEMBER	OCTOBER -	JANUARY-MARCH		APRIL-JUNE	
	LECTURES		DECEMBER				
PART -III	THEORY	PRODUCTION	ELECTRONICS	COMMUNICATIONS		COMPUTER	
PAPER –		AND	NO. OF	AND TRANSMISSION		PROGRAMMING	
IV		MEASUREMENT	CLASSES=14	OF E-M WAVE		TUTORIAL CLASSES	
70		OF HIGH		NO. OF CLASSES=14		ON PROGRAMMING	
MARKS		VACUUM				NO. OF CLASSES=14	
		ENERGY					UNIVERSITY
		SOURCES			Z		FINAL
		NO. OF			10		EXAMINATION
		CLASSES=14			ATION		
	PRACTICAL	1. CONVERSION	3. INCREASE OF	TO CALIBRATE A	AMIN	TO FAMILIARISE	
PAPER –		OF AMMETER TO	INTERNAL	GIVEN	₹	WITH THE	
IV		VOLTMETER AND	RESISTANCE OF	TEMPERATURE		OPERATING	
30		VICE VERSA	AN ANALOG	SENSOR AND USE	ΓE	SYSTEM AND TO	
MARKS		2. TO CONSTRUCT	VOLTMETER BY	THE SENSOR	TEST	SOLVE SIMPLE	
		AN ADJUSTABLE	USING OPAMP	TO DEVELOP A	Ξ	PROBLEMS BY	
		VOLTAGE POWER	4. USE OF OPAMP	PHOTOSENSOR AND		PROGRAMMING IN	
		SOURCE	AS INVERTING,	USE OF IT		C OR FORTRAN	
		NO. OF	NON INVERTING,	NO. OF CLASSES=24		NO. OF CLASSES=32	
		CLASSES=28	DIFFERENTIAL				
			AMPLIFIER AND				
			ADDER				
			NO. OF				
			CLASSES=20				