DEPARTMENT OF PHYSICS

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HONOURS (CBCS Syllabus)	NUMBER OF LECTURES	JULY-SEPTEMBER 7 weeks	OCTOBER – DECEMBER 5 weeks	**HONOURS (CBCS Syllabus)**	NUMBER OF LECTURES	JANUARY-MARCH 5.5 weeks		APRIL-JUNE 7.5 weeks	
Semester-I C -I	THEORY 12 weeks Credit: 4	MATHEMATICAL PHYSICS – I Calculus, Vector Calculus NO. OF CLASSES= 28	MATHEMATICAL PHYSICS – I Calculus, Vector Calculus, Probability NO. OF CLASSES= 20	Semester-II C -3	THEORY 13 weeks Credit: 4	ELECTRICITY AND MAGNETISM NO. OF CLASSES= 22		ELECTRICITY AND MAGNETISM NO. OF CLASSES= 30	
Semester – I C-2	THEORY 12 weeks Credit: 4	MECHANICS NO. OF CLASSES=28	MECHANICS NO. OF CLASSES=20	Semester-II C -4	THEORY 13 weeks Credit: 4	WAVES AND OPTICS NO. OF CLASSES= 22		WAVES AND OPTICS NO. OF CLASSES= 30	
Semester – I P-I	PRACTICAL Credit:2	MATHEMETICAL PHYSICS LAB using **PYTHON** NO. OF. CLASSES= 28 **(subject to the arrival of new computer with given specifications)**	MATHEMETICAL PHYSICS LAB using **PYTHON** NO. OF. CLASSES= 20 **(subject to the arrival of new computer with given specifications)**	Semester – II P-3	PRACTICAL 13 weeks Credit: 2	**1.To determine an unknown Low Resistance using Carey Foster's Bridge. (subject to arrival of the instrument)** 2. To verify the Thevenin and Norton theorems. 3. To verify the Superposition and Maximum power transfer theorems. 4. To determine self-inductance of		6.**To study the response curve of a parallel LCR circuit and determine its (a) Anti-resonant frequency and (b) Quality factor Q. (Subject to the arrival of new instrument)** 7.To study the characteristics of a series RC Circuit. 8.**To determine an unknown Low Resistance using Potentiometer**.	

						a coil by Anderson's bridge. 5. **To study response curve of a Series LCR circuit and determine its (a) Resonant frequency, (b) Impedance at resonance, (c) Quality factor Q, and (d) Band width. (Subject to the arrival o new instrument)**		**(subject to arrival of the instrument)** 9.**To determine the resistance of a 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 –I P-II	PRACTICAL Credit: 2	1. YOUNG'S MODULUS 2. MOMENT OF INERTIA 3. COEFFICIENT OF VISCOSITY 4. MODULUS OF RIGIDITY **5. TO STUDY RANDOM ERROR (Subject to arrival of the instrument)** **6. TO DETERMINE 'g'AND VELOCITY OF A FREELY**	**8. To determine the elastic Constants of a wire by Searle's method (Subject to arrival of the instrument)** **9. To determine the value of g using Bar Pendulum.**	Semester – I P-4	PRACTICAL 13 weeks Credit: 2	**To determine the frequency of an electric tuning fork by Melde's experiment** and verify λ_2 –T law. **(Subject to arrival of the instrument**) 2. To determine refractive index of the Material of a prism using sodium source.		**To study Lissajous Figures to derermine the phase difference between two harmonicoscillatiions. (Subject to arrival of the Instrument)** 8. To determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-	

		FALLING BODY BY DIGITAL TIME TECHNIQUE (Subject to arrival of the instrument) **7. TO DETERMINE HEIGHT OF A BUILDING USING SEXTANT (Subject to arrival of the instrument)** NO. OF CLASSES=28	**(Subject to arrival of the instrument)** **10. To determine the value of g using Kater's Pendulum (Subject to arrival of the instrument) (Subject to arrival of the instrument)** **11. To study the Motion of Spring and calculate, (a) Spring constant, (b) g and (c) Modulus of rigidity. (Subject to arrival of the instrument** NO. OF CLASSES=20			3. To determine the dispersive power and Cauchy constants of the material of a prism using mercury source. **(subject to the arrival of Hg source)** 4. To determine wavelength of sodium light using Fresnel Biprism. 5. To determine wavelength of sodium light using Newton's Rings. 6. To determine dispersive power and resolving power of a plane diffraction grating. NO. OF CLASSES = 22		shaped Film. **(Subject to arrival of theInstrument)** 9. Familiarization with: Schuster`s focusing; determination of angle of prism. 10. To determine wavelength of (1) Na source and (2) spectral lines of Hg source using plane diffraction grating. **(subject to arrival of the Hg. source)** 11.To investigate the motion of coupled oscillators. **(Subject to arrival of theInstrument)** 12.To determine the wavelength of sodium source using Michelson's interferometer. **(Subject to arrival of theInstrument)**	

								NO. OF. CLASSES = 30
PART -II PAPER -III	THEORY	UNIT IIIA, GROUP A ELECTRICITY I NO. OF CLASSES= 15	UNIT IIIB, GROUP B ELECTRICITY II NO. OF CLASSES= 12			UNIT IIIB, GROUP D ELECTRONICS NO. OF CLASSES= 12		
PAPER -III	THEORY	UNIT IVA, GROUP B Electromagnetic Theory NO. OF CLASSES=8	UNIT IIIB, GROUP C Electromagnetic Theory NO. OF CLASSES=6			Electromagnetic Theory NO. OF CLASSES=6 Electricity II NO. OF. CLASSES=10		ELECTRONICS NO. OF CLASSES= 20 Electromagnetic Theory NO. OF CLASSES=6
PART -II PAPER -IVA	THEORY	PHYSICAL OPTICS NO. OF CLASSES=15 Ray Optics NO. OF CLASSES=7	PHYSICAL OPTICS NO. OF CLASSES=10 Ray Optics NO. OF CLASSES=6			UNIT IVA, GROUP A Ray Optics NO. OF CLASSES=6		Ray Optics NO. OF CLASSES=6
PART -II PAPER - IVB	Practical	MUTUAL INDUCTANCE LCR ,VERIFICATION OF THEVENIN, NORTON AND MAXIMUM POWER TRANSFER THEOREM NO. OF CLASSES= 28	VERIFICATION OF LOGIC GATES AND DE MORGAN'S THEOREMS ZENER DIODE NO. OF CLASSES= 20			BRIDGE RECTIFIER ZENER DIODE TRANSISTOR IN CE AND CB MODE NO. OF CLASSES= 12		POLARIMETER NEWTON'S RINGS DOUBLE SLIT NO. OF CLASSES= 16

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HONOURS	NUMBER OF LECTURES	JULY-SEPTEMBER	OCTOBER -DECEMBER	JANUARY-MARCH	TEST EXAMINATIO	APRIL-JUNE	
PART -III PAPER -V	THEORY	UNIT VB, GROUP D QUANTUM MECHANICS NO. OF CLASSES= 21	UNIT VB, GROUP D QUANTUM MECHANICS NO. OF CLASSES= 18	UNIT VB, GROUP E SPECTROSCOPY NO. OF CLASSES= 6			TUTORIAL ()

				UNIT VA, GROUP A CLASSICAL MECHANICS NO. OF CLASSES= 20			AND UNIVERSITY FINAL EXAMINATION
		UNIT VA, GROUP B SPECIAL THEORY OF RELATIVITY NO. OF CLASSES= 14	UNIT VB, GROUP E SPECTROSCOPY NO. OF CLASSES= 10				
		UNIT VA, GROUP C STATISTICAL PHYSICS NO. OF CLASSES= 14					
			UNIT VB, GROUP E X-Ray= 5				
PART -III PAPER -VI	THEORY	UNIT VIA, GROUP A NUCLEAR PHYSICS NO. OF CLASSES=28	UNIT VIA, GROUP A NUCLEAR PHYSICS NO. OF CLASSES=20	UNIT VIB, GROUP C SOLID STATE PHYSICS NO. OF CLASSES= 18			
		UNIT VIA, GROUP D LASER AND FIBRE OPTICS NO. OF CLASSES= 7	UNIT VIA, GROUP B INSTRUMENTAL METHOD NO. OF CLASSES=5				
PART -III PAPER - VIIA	THEORY		UNIT VIIA ELECTRONICS NO. OF CLASSES= 12	UNIT VIIA ELECTRONICS NO. OF CLASSES= 12			
PART -III PAPER - VIIB	Practical	COMPUTER PROGRAMMING NO. OF CLASSES= 14	COMPUTER PROGRAMMING NO. OF CLASSES= 16	COMPUTER PROGRAMMING NO. OF CLASSES= 10			

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HONOURS	NUMBER OF LECTURES	JULY-SEPTEMBER	OCTOBER -DECEMBER	JANUARY-MARCH	TEST EXAMINATI	APRIL-JUNE	
PART -III PAPER -	Practical	BIPRISM POLAROID GRATING	B-H LOOP**(SUBJECT TO ARRIVAL OF THE INSTRUENT)**	BAND GAP CROSSED GRATING NO. OF CLASSES= 10			

VIIIA		NO. OF CLASSES=14	ANDERSON BRIDGE FOURIER SPECTRUM NO. OF CLASSES=14				UNIVERSITY FINAL EXAMINATION
PART -III PAPER - VIIIB		VOLTAGE AMPLIFIER WIEN BRIDGE OSCILLATOR TEMPERATURE CONTROLLER NO. OF CLASSES=14	TRANSISTOR CHARACTERISTICS OP-AMP BOOLEAN EXPRESSION NO. OF CLASSES=14	REGULATED POWER SUPPLY H Parameters NO. OF CLASSES =10			

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GENERAL	NUMBER OF LECTURES	JULY-SEPTEMBER Particle Dynamics STR Mathematical methods Elasticity NO. OF CLASS = 28	OCTOBER – DECEMBER Particle Dynamics STR Oscillations Gravitation NO. OF CLASS = 20	JANUARY-MARCH Vector Analysis Electrostatics Electromegnetic Induction NO. OF CLASS = 24	TEST EXAMINATION	APRIL-JUNE Linear Network Maxwells Equations Wave Propagation Magnetic Induction NO. OF CLASSES= 32	UNIVERSITY FINAL EXAMINATION
	PRACTICAL	1.MODULUS OF RIGIDITY 2.MOMENT OF INERTIA 3.COEFFICIENT OF VISCOSITY 4.YOUNG'S MODULUS **5.To study the random error in observations of time period of some oscillation using chronometer.**	**6.To determine the height of a building using a Sextant.** **7. To determine the elastic Constants of a wire by Searle's method.** **8.To determine the value of g using Bar Pendulum.** **9. To determine the**	To determine an unknown Low Resistance using Carey Foster's Bridge. **(SUBJECT TO ARRIVAL OF THE INSTRUMENT)** 2. To verify the Thevenin and Norton theorems. 3. To verify the Superposition and Maximum power transfer		6.To study the response curve of a parallel LCR circuit and determine its (a) Anti- resonant frequency and (b) Quality factor Q. **(SUBJECT TO ARRIVAL OF THE INSTRUMENT)** 7. To study the characteristics of a series RC Circuit. 8. To determine an unknown Low	

		(**SUBJECT TO ARRIVAL OF THE INSTRUMENT** NO. OF CLASSES=28	**value of g using Kater's Pendulum.** To study the Motion of Spring and calculate, (a) Spring constant, (b) g and (c) Modulus of rigidity (**SUBJECT TO ARRIVAL OF THE INSTRUMENT**) NO. OF CLASSES=20	theorems. 4. To determine self-inductance of a coil by Anderson's bridge. **(SUBJECT TO ARRIVAL OF THE INSTRUMENT)** 5. To study response curve of a Series LCR circuit and determine its (a) Resonant frequency, (b) Impedance at resonance , (c) Quality factor Q, and (d) Band width. **(SUBJECT TO ARRIVAL OF THE INSTRUMENT)** **No. of Classes = 24**		Resistance using Potentiometer. **(SUBJECT TO ARRIVAL OF THE INSTRUMENT)** 9. To determine the resistance of a 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)** **NO. OF CLASS = 32**	
PART II PAPER II	**THEORY**	GROUP A GEOMETRICAL OPTICS GROUP B PHYSICAL OPTICS NO. OF CLASSES=14	GROUP C ELECTRICITY NO. OF CLASSES=14	GROUP D ELECTRONICS NO. OF CLASSES=14		GROUP E MODERN PHYSICS NO. OF CLASSES=14	
Paper III,	**PRACTICAL**	YOUNG'S MODULUS COEFFICIENT OF VISCOSITY SURFACE TENSION	REFRACTIVE INDEX OF THE MATERIAL OF A PRISM NEWTON'S RINGS	CONCENTRATION OF SUGAR SOLUTION USINGPOLARIME- TER TEMPERATURE		E-T CURVE OF A THERMOCOUPLE NO. OF CLASSES=	

Group B		NO. OF CLASSES=	NO. OF CLASSES=	COEFFICI- ENT OF THE MATERIAL OF A COIL USING CAREY-FOSTER BRIDGE. NO. OF CLASSES=			

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