LECTURE PLAN

DEPARTMENT PHYSICS

SESSION:2023-24

Mode	Year/ Semester	Paper/ Paper Code	Paper Name	Teacher	Unit/ Topic	No.of Lecture	Month/ Duration
OLDODL	I SEM(NEP)VI -SEM	PHY-M-T -1 PHY-MI-P-01	MATHEMATICAL PHYSICS-I DIGITAL, ANALOG CIRCUITS AND INSTRUMENTATION MATHEMATICAL PHYSICS-I	SYED JAHID ANWARSYED JAHID ANWAR AZIZUR RZHZMZN	**Calculus:** Recapitulation Second Order Differential equations Calculus of functions of more than one variable	(5)	SEPT
					Vector Integration	5	NOV-DEC
					Orthogonal Curvilinear Coordinates	3	JAN
					Matrices	3	JAN
		PHY-M-P-01	MATHEMATICAL PHYSICS-I	AZIZUR RZHZMZN	**Introduction and Overview**	1	SEPT
					Basics of scientific computing	2	NOV
					Errors and error Analysis	1	DEC
					Programs	4	JAN
					Introduction to programming in Python/Fortran/Matlab/C/C++:	5	FEB-MARCH

		PHY-SEC-T-1	ELECTRICAL CIRCUITS & NETWORK SKILLS	SYED JAHID ANWAR	Basic Electricity Principles	6	JAN
					Understanding Electrical Circuits	8	JAN
					Electric Motors	3	FEB
					Solid-State Devices	4	MARCH
ODL	II SEM(NEP)	PHY-M-T-02	MECHANICS	SYED JAHID ANWAR	Fundamentals of Dynamics	6	MAY
					Work and Energy:	4	MAY
					Collisions	3	JUN
					Rotational Dynamics	04	JULY
					Elasticity	3	JULY
		PHY-M-P-02	MECHANICS	SYED JAHID ANWAR	Measurements of length (or diameter) using vernier caliper, screw gauge and travelling microscope.	02	MAY
					To study the random error in observations.	01	MAY
					To determine the value of g using Bar Pendulum.	01	JUN
					To determine the value of g using Kater's Pendulum.	01	JULY
					To draw the frequency - resonance length curve of a sonometer wire and to determine an unknown frequency of a tuning fork	02	JULY
		PHY-MI-T-1	MATHEMATICAL PHYSICS -I	SYED JAHID ANWAR	Calculus: Recapitulation Second Order Differential equations	5	MAY
					Vector Integration	5	MAY
					Matrices	5	JUN
					Dirac Delta function and its properties	2	JULY

		PHY-MI-P-1	MATHEMATICAL PHYSICS -I	AZIZUR RAHAMAN	Introduction and Overview	1	JUNE
					Basics of scientific computing	2	JUNE
					Errors and error Analysis	1	JUNE
					Programs	3	JULY
					Introduction to programming in Python/Fortran/Matlab/C/C++:	3	JULY-AUG
		PHY-SEC-T-2	Basic Instrumentation Skills	SYED JAHID ANWAR	Basic of Measurement	3	MAY
					Electronic Voltmeter	3	JUNE
					Cathode Ray Oscilloscope	8	JULY-AUG
ODL	III SEM	PHY-G-CC-T-03	THERMAL PHYSICS AND STATISTICAL MECHANICS		Laws of Thermodynamics	12	OCT-NOV-DEC
					Thermodynamical Potentials	4	JAN
					Kinetic Theory of Gases	6	FEB
		PHY-G-CC-P-03	THERMAL PHYSICS AND STATISTICAL MECHANICS		To determine the coefficient of thermal conductivity of Cu by Searle's Apparatus	02	JAN
		PHY-SEC-01	RENEWABLE ENERGY AND ENERGY HARVESTING		Fossil fuels and Alternate Sources of energy	3	OCT
					Solar energy	6	NOV
					Wind Energy harvesting	3	DEC
					Ocean Energy	5	JAN
					Geothermal Energy	2	FEB
ODL	IV-SEM	PHY-G-CC-T-04	WAVES AND OPTICS		Superposition of Two Collinear Harmonic oscillations	4	FEB
					Superposition of Two Perpendicular Harmonic Oscillations	2	FEB
					Waves Motion- General	2	MARCH
					Fluids	2	APRIL
					Sound	3	APRIL
					Michelson's Interferometer	3	MAY

					Diffraction	8	JULY
					Polarization	5	AUG
		PHY-G-CC-P-04	WAVES AND OPTICS		To determine the Refractive Index of the Material of a Prism using Sodium Light.	1	FEB
					To determine Dispersive Power of the Material of a Prism using Mercury Light	1	MARCH
					To determine the value of Cauchy Constants.	1	AUG
		PHY-G-SEC-T-02	WEATHER FORECASTING		Introduction to atmosphere	2	MARCH
					Measuring the weather	4	APRIL
					Weather systems	3	MAY
					Climate and Climate Change	3	JULY
					Basics of weather forecasting	4	AUG
ODL	V-SEM	PHY-G-DSE-T-01	Mechanics	SYED JAHID ANWAR	Vectors:	4	AUG
					Ordinary Differential Equations	6	AUG
					Laws of Motion	5	SEPT
					Momentum and Energy	4	SEPT-NOV
					ROTATIONAL MOTION	2	NOV
					GRAVITATION	02	DEC
					ELASTICITY	02	DEC
					To study the random error in observations.	1	NOV
					To determine g and velocity for a freely falling body using Digital Timing Technique	2	NOV
					To determine the value of g using Kater's Pendulum.	1	DEC
		PHY-G-DSE-T-02	DIGITAL, ANALOG CIRCUITS AND INSTRUMENTATION	SYED JAHID ANWAR	To determine the value of g using Bar Pendulum	1	DEC

					Semiconductor Diodes	**10**	**APRIL**
					Two-terminal Devices and their Applications	**6**	**APRIL**
					Bipolar Junction transistors	**6**	**APRIL**
					Amplifiers	**10**	**JUNE**
					Applications of Op-Amps	**9**	**JUNE**
					Conversion	**3**	**JULY**
					To study the V-I characteristics of a Zener diode and its use as voltage regulator.	**2**	**AUG**
					Study of V-I & power curves of solar cells, and find maximum power point & efficiency.	**2**	**APRIL**
					To study the characteristics of a Bipolar Junction Transistor in CB configuration	**2**	**AUG**