

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI

Course Schedule: June - November 2023

Department : **Physics**
Name/s of the Faculty : **Dr. C. Stella**
Course Title : **Physics for Chemistry I**
Course Code : **19PH/AC/PC33**
Shift : **I**

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
June 19 – June 26, 2023 (Day Order 1 to 6)	Unit I: Properties of Matter Elasticity: Moduli of Elasticity – Poisson’s Ratio-Young’s Modulus – Bending of Beams - Expression for Bending Moment-Depression at the Loaded End of the Cantilever	Lecture	Properties of Matter and Acoustics by Murugesan R	Questioning
June 27 – July 04, 2023 (Day Order 1 to 6)	Depression and Elevation at the Mid Point of a Loaded Beam- Torsion in a Wire–Torsional Oscillations–Torque Per Unit Twist - Expression for Period	Lecture	Properties of Matter and Acoustics by Murugesan R	Questioning and problem solving
July 05– July 12, 2023 (Day Order 1 to 6)	Unit II : Surface Tension and Viscosity: Introduction- Experimental Determination of Surface Tension and Interfacial Surface Tension by Drop Weight Method	Lecture	Properties of Matter and Acoustics by Murugesan R	Questioning
July 13 – July 20, 2023 (Day Order 1 to 6)	Variation of Surface Tension with Temperature-Streamline and Turbulent Flow – Critical Velocity	Lecture	Properties of Matter and Acoustics by Murugesan R	Questioning and problem solving

July 21 – July 28, 2023 (Day Order 1 to 6)	Expression for Critical Velocity- Variation of Viscosity with Temperature Unit III: Mechanics Dynamics: Moment of Inertia – Definition	Lecture	Properties of Matter and Acoustics by Murugesan R Dynamics by Narayanamurthi.M and Nagaratham.N	Questioning and problem solving
July 31 – Aug 03, 2023 (Day Order 1 to 4)	Compound Pendulum - Expression for the Period of Oscillation	Lecture	Dynamics by Narayanamurthi.M and Nagaratham.N	Component Test I
Aug 04 – Aug 09, 2023	C.A. Test – I			
Aug 10 – Aug 11, 2023 (Day Order 5 to 6)	Centre of Suspension and Centre of Oscillation–Minimum Period of Oscillation of a Compound Pendulum	Lecture	Dynamics by Narayanamurthi.M and Nagaratham.N	Questioning and problem solving
Aug 14 – Aug 22, 2023 (Day Order 1 to 6)	Determination of ‘G’ Unit IV: Relativity Inertial Frames of Reference - Special Theory of Relativity	Lecture	Dynamics by Narayanamurthi.M and Nagaratham.N Modern Physics by Murugesan. R	Questioning and discussion
Aug 23 – Aug 31, 2023 (Day Order 1 to 6)	Postulates of Special Theory of Relativity- Lorentz Transformation Equations	Lecture	Modern Physics by Murugesan. R	Questioning and discussion
Sept 01 – Sept 11, 2023 (Day Order 1 to 6)	Length Contraction - Time Dilation - Experimental Evidence – Twin Paradox	Lecture	Modern Physics by Murugesan. R	Questioning And problem solving
Sept 12 – Sept 19, 2023 (Day Order 1 to 6)	Relativistic Momentum (no derivation) – Mass Energy Relation – Physical Significance	Lecture	Modern Physics by Murugesan. R	Questioning
Sept 20 - Sept 27, 2023 (Day Order 1 to 6)	Unit V: Optics Interference: Introduction - Interference Due to	Power point presentation	Textbook of Optics - Subrahmanyam. Nand Lal Brij	Component Test II

	Reflected Light – Newton’s Rings –			
Sept 29 – Oct 03, 2023 (Day Order 1 to 3)	Measurements of Wavelength - Introduction to Diffraction	Lecture	Textbook of Optics - Subrahmanyam. Nand Lal Brij	Questioning and problem solving
Oct 04 – Oct 09, 2023	C.A. Test – II			
Oct 10 – Oct 12, 2023 (Day Order 4 to 6)	Diffraction: Fraunhofer Diffraction- Transmission Grating- Normal Incidence – Determination of Wavelength	Power point presentation	Textbook of Optics - Subrahmanyam. Nand Lal Brij	Questioning and problem solving
Oct 13 – Oct 20, 2023 (Day Order 1 to 6)	Polarisation: Introduction-Plane of Polarization Polarisation by Refraction - Brewster’s Law- Polarisation by Reflection-Double Refraction – Nicol Prism – Nicol Prism as a Polarizer and Analyser	Lecture	Textbook of Optics - Subrahmanyam. Nand Lal Brij	Questioning
Oct 25 – Oct 27, 2023 (Day Order 1 to 3)	Polaroids-uses of Polaroids	Lecture	Textbook of Optics - Subrahmanyam. Nand Lal Brij	Questioning and discussion
Oct 28- Nov 04, 2023	REVISION			