

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI

Course Schedule: June - November 2024

Department : PHYSICS
Name/s of the Faculty : Dr. D. Anceila
Course Title : 19ID/IC/RE55
Course Code : Renewable Energy and Energy Economics
Shift : I

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Jun 19 – 26, 2024 (Day Order 1 - 6)	Unit 1 Energy Resources 1.1 Energy routes for non renewable energy resources -age renewables and alternatives	Lecture, PPT Presentation, Demonstration Video	Ramesh R. Kumar K.U Renewable Energy Technologies, Narosa Publishing House, New Delhi, 1997.	
Jun 27 – July 4, 2024 (Day Order 1 - 6)	1.1 Moving towards renewable energy resources – energy conservation practices	Lecture, PPT Presentation, Demonstration Video	Ramesh R. Kumar K.U Renewable Energy Technologies, Narosa Publishing House, New Delhi, 1997.	Group discussion
July 5 – 12, 2024 (Day Order 1 - 6)	1.2 types of energy sources Renewable and non-renewable sources	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	Case study
July 15 – 23, 2024 (Day Order 1 - 6)	Unit 2 Solar Energy 2.1 Fundamentals of solar radiation – nature of solar radiation	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	
July 24 – 31, 2024 (Day Order 1 - 6)	2.1 radiation on earth’s surface – sum path chart. 2.2 Photovoltaics	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	quiz
Aug 1 – 5, 2024 (Day Order 1 - 3)	2.2 principles – physics and operation of solar cells and revision for CA	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	
Aug 6 – 10, 2024	C.A. Test – I			

Aug 12 – 14, 2024 (Day Order 4-6)	2.2 Solar panels- solar power plants	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	
Aug 16 – 23, 2024 (Day Order 1-6)	2.3 Fundamentals of solar collectors – conversion of solar energy to heat energy	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	Model Making
Aug 27 – Sep 3, 2024 (Day Order 1-6)	2.3 Applications – solar cooking – solar water heater	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	Group Discussion
Sep 4 – 11, 2024 (Day Order 1-6)	Unit 3 Wind Energy 3.1 Introduction – basic principles of wind energy conversion.	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	
Sep 12 - 20, 2024 (Day Order 1- 6)	3.2 Nature of wind – power in the wind – forces on the blades	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	Assignment
Sep 23 - 26, 2024 (Day Order 1-4)	3.2 Forces on the wind energy conversion and Revision	Lecture, PPT Presentation, Demonstration Video	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	
Sep 27 – Oct 3, 2024	C.A. Test – II			
Oct 4 – 5, 2024 (Day 5 & 6)	3.2 sites selection conversion	Lecture, PPT Presentation,	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	
Oct 7 - 15, 2024	3.3 Classification of wind energy	Lecture, PPT	G.D Rai, Solar	Quiz

(Day Order 1 to 6)		Presentation, Demonstration Video	Energy Utilization, 5th edition Khanna Publishers, 2010	
Oct 16 - 22, 2024 (Day Order 1 to 6)	3.3 Advantages and limitations of wind energy And Revision	Lecture, PPT Presentation,	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	
Oct 23 - 24, 2024 (Day Order 1 to 2)	REVISION			