

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI

Course Schedule – JULY 2023 to NOVEMBER 2023

Department : PHYSICS
Name/s of the Faculty : Dr. ANCEILA. D, Dr. ASISI JANIFER. M
Course Title : RENEWABLE ENERGY AND ENERGY ECONOMICS
Course Code : 19ID/IC/RE55
Shift : I

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Jun 19 – 23, 2023 (Day Order 1 to 5)	Unit 1 Energy Resources 1.1 Energy routes for non-renewable energy resources -age renewables and alternatives	Lecture	Ramesh R. Kumar K.U Renewable Energy Technologies, Narosa Publishing House, New Delhi, 1997.	Question/Answer session
Jun26– 30, 2023 (Day Order 6 to 3)	1.1 Moving towards renewable energy resources – energy conservation practices	Lecture	Ramesh R. Kumar K.U Renewable Energy Technologies, Narosa Publishing House, New Delhi, 1997.	Question/Answer session
Jun 31– Jul 07, 2023 (Day Order 1 to 3)	1.2 types of energy sources- Renewable and non-renewable sources	Lecture	Ramesh R. Kumar K.U Renewable Energy Technologies, Narosa Publishing House, New Delhi, 1997.	Question/Answer session and class activity
Jul 10 – Jul 14, 2023 (Day Order 4 to 2)	Unit 2 Solar Energy 2.1 Fundamentals of solar radiation – nature of solar radiation	Lecture	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	Question/Answer session
Jul 17 – Jul 21, 2023 (Day Order 3 to 1)	2.1 radiation on earth's surface – sum path chart. 2.2 Photovoltaics	Lecture	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	III rd Component

Jul 24 – Aug 03, 2023 (Day Order 2 to 4)	2.2 principles – physics and operation of solar cells and revision for CA	Lecture	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	Question/Answer session
C.A. Test – I				
Aug 04 – Aug 09, 2023	2.2 Solar panels- solar power plants	Lecture	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	Question/Answer session
Aug 10 – Aug 18, 2023 (Day Order 5 to 4)	2.3 Fundamentals of solar collectors – conversion of solar energy to heat energy	Lecture	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010.	Question/Answer session and class activity
Aug 21 – Aug 31, 2023 (Day Order 5 to 6)	2.3 Applications – solar cooking – solar water heater	Lecture	G.D Rai, Solar Energy Utilization, 5th edition Khanna Publishers, 2010	Question/Answer session
Sept 01 – Sept 11 2023 (Day Order 1 to 6)	Unit 3 Wind Energy 3.1 Introduction – basic principles of wind energy conversion.	Lecture	Thipse S.S. Nonconventional and Renewable energy sources, Narosa Publishing House, New Delhi, 2014.	Question/Answer session
Sept 12 – Oct 19, 2023 (Day Order 1 to 6)	3.2 Nature of wind – power in the wind – forces on the blades	Lecture	Thipse S.S. Nonconventional and Renewable energy sources, Narosa Publishing	III rd Component
Sept 20 – Oct 03, 2023 (Day Order 1 to 3)	3.2 Forces on the wind energy conversion and Revision	Lecture	Thipse S.S. Nonconventional and Renewable energy sources, Narosa Publishing House, New Delhi, 2014.	Question/Answer session
Oct 4 to 9, 2023	C.A. Test – II			
Oct 10 – Oct 13, 2023 (Day Order 4 to 1)	3.2 sites selection conversion	Lecture	Thipse S.S. Nonconventional and Renewable	Question/Answer session

			energy sources, Narosa Publishing House, New Delhi, 2014.	
Nov 18- Nov 20, 2023	3.3 Classification of wind energy	Lecture	Thipse S.S. Nonconventional and Renewable energy sources, Narosa Publishing House, New Delhi, 2014.	Question/Answer session
Oct 16 – Oct 27, 2023 (Day Order 2 to 3)	3.3 Advantages and limitations of wind energy And Revision	Lecture	Thipse S.S. Nonconventional and Renewable energy sources, Narosa Publishing House, New Delhi, 2014.	Question/Answer session
Oct 28, 2023	REVISION HOLIDAY BEGINS			