1203.

Name of Faculty	Sh. Revti Raman
Discipline	Electrical Engineering
Semester	3rd
Subject	NON-CONVENTIONAL ENERGY SOURCES
Lesson Plan Duration	From Sep2022 to Jan2023
Work load (Theory + Practical) Per Week	(04+00)

Week	**Theory**	
	Day	**Topics**
1st	1	**1 Basic of Energy**Classification of Energy-
	2	Primary and secondary energy
	3	Commercial and non- commercial energy
	4	Importance of non-conventional energy sources
2nd	1	Present scenario, future prospectus
	2	Energy scenario in India
	3	Sector-wise energy consumption (domestic
	4	Industrial, agriculture etc.)
3rd	1	Revision
	2	**2 Solar Energy**
	3	Principle of conversion of solar radiation into heat,
	4	photo-voltaic cell
4th	1	Electricity generation, application of solar energy
	2	Solar water heaters
	3	Solar furnaces
	4	Solar cookers
5th	1	Solar lighting
	2	Solar pumping
	3	Revision
	4	**3 Bio-energy**: Bio-mass conversion technologies-
6th	1	Wet and
	2	Dry processes
	3	Methods for obtaining energy from biomass
	4	Power generation using gasifiers
7th	1	Revision
	2	Class Test
	3	**4 Wind Energy:**
	4	Wind energy conversion
8th	1	Windmills
	2	Electricity generation from wind

	3	Types of wind mills
	4	local control
9th	1	Energy storage
	2	Revision
	3	**5 Geo-thermal and Tidal Energy:**
	4	Geo-thermal sources,
10th	1	Ocean thermal electric conversion
	2	Open and
	3	Closed cycles
	4	Hybrid cycles
	1	Prime movers for geo-thermal energy conversion
	2	Steam Generation
11th	3	Electricity generation.
	4	Revision
12th	1	**6 Magneto Hydro Dynamic (MHD) Power Generation**
	2	Working and construction
	3	Advantages and disadvantages
	4	Revision
13th	1	Problem solving/checking
	2	**7 Fuel Cells**
	3	Design and
	4	operating principles of a fuel cell
14th	1	Conversion efficiency
	2	Work output and e.m.f of fuel cells,
	3	Applications.
	4	Revision
15th	1	Problem solving/checking
	2	**8 Introduction to Hydro Energy**
	3	Mini hydro plants
	4	Micro hydro plants
16th	1	Revision
	2	HSBTE old paper solution
	3	HSBTE old paper solution
	4	HSBTE old paper solution