

Discipline: Electrical  
 Semester: 6<sup>th</sup>  
 Name of the teaching faculty: Abiswa kaur  
 Subject: RE  
 No. of days/weeks class allotted: 48 / 06  
 Semester from: 10:03:2022 to 10:06:2022  
 No. of weeks: 14

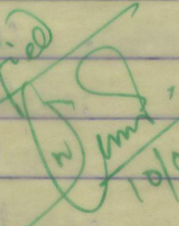
Weeks	Class days	Theory/Practical Topics
	1 <sup>st</sup>	
7.3.22	2 <sup>nd</sup>	
to	3 <sup>rd</sup>	
12.3.22	4 <sup>th</sup>	• Introduction to Renewable Energy
	5 <sup>th</sup>	• Environmental consequences of fossil fuel use
	6 <sup>th</sup>	• Importance of renewable source of energy
	1 <sup>st</sup>	• Sustainable Design & development
14.3.22	2 <sup>nd</sup>	• Types of RE sources
to	3 <sup>rd</sup>	• Limitation of RE sources
19.3.22	4 <sup>th</sup>	• Present Indian & international energy scenario of (conventional) RE sources.
	5 <sup>th</sup>	<b>Dola Purnima</b>
	6 <sup>th</sup>	<b>Holi</b>
	1 <sup>st</sup>	• Solar Energy
21.3.22	2 <sup>nd</sup>	• Solar photovoltaic system - operating principle
to	3 <sup>rd</sup>	• Photovoltaic cell concepts
26.3.22	4 <sup>th</sup>	• Cell, module, array, series & parallel connections.
	5 <sup>th</sup>	• maximum power point tracking (MPPT)
	6 <sup>th</sup>	• classification of energy sources.
	1 <sup>st</sup>	• Extra-terrestrial & terrestrial Radiation
28.3.22	2 <sup>nd</sup>	• Azimuth angle, zenith angle, Hour angle, Hour. angle.
to	3 <sup>rd</sup>	• Irradiance, Solar constant.
2.4.22	4 <sup>th</sup>	• Solar collectors, types & performance characteristics.
	5 <sup>th</sup>	<b>Utkal Divas</b>
	6 <sup>th</sup>	Application Photovoltaic - battery charger, domestic lighting
	1 <sup>st</sup>	• street lighting, water pumping, solar cooker, solar pond.
4.4.22	2 <sup>nd</sup>	wind Energy Introduction
to	3 <sup>rd</sup>	• Wind energy conversion
9.4.22	4 <sup>th</sup>	• Types of wind turbines
	5 <sup>th</sup>	• Aerodynamics of wind motors.
	6 <sup>th</sup>	• Wind turbine control systems, conversion to electrical Power



weeks	class day	Theory / Practical Topics
	1 <sup>st</sup>	• Induction & synchronous Generators
11.4.22	2 <sup>nd</sup>	• Grid connected & self excited induction gen. operation
to	3 <sup>rd</sup>	• Constant voltage & frequency gener <sup>n</sup> with power electronic control
16.4.22	4 <sup>th</sup>	Maha Visuba bankranti
	5 <sup>th</sup>	Good Friday
	6 <sup>th</sup>	• Single & double output systems
	1 <sup>st</sup>	• characteristics of wind Power plant
18.4.22	2 <sup>nd</sup>	• Continue
to	3 <sup>rd</sup>	• Biomass Power
23.4.22	4 <sup>th</sup>	• Introduction to Biomass Power
	5 <sup>th</sup>	• Energy from biomass
	6 <sup>th</sup>	• continue
	1 <sup>st</sup>	• Biomass as Renewable Energy source.
25.4.22	2 <sup>nd</sup>	• continue
to	3 <sup>rd</sup>	• Types of biomass fuels
30.4.22	4 <sup>th</sup>	• continue
	5 <sup>th</sup>	• Biomass fuels solid.
	6 <sup>th</sup>	• continue
	1 <sup>st</sup>	• Biomass fuels liquid & gas
2.5.22	2 <sup>nd</sup>	Id-ul-titre
to	3 <sup>rd</sup>	• Biomass fuels liquid & gas
7.5.22	4 <sup>th</sup>	• Combustion & fermentation
	5 <sup>th</sup>	• continue
	6 <sup>th</sup>	• Anaerobic digester
	1 <sup>st</sup>	• continue
9.5.22	2 <sup>nd</sup>	• Types of biogas digester
to	3 <sup>rd</sup>	• continue
14.5.22	4 <sup>th</sup>	• wood gasifier
	5 <sup>th</sup>	• continue
	6 <sup>th</sup>	• Pyrolysis
		• continue



Weeks	Class day	Theory/Practical Topics
	1 <sup>st</sup>	<b>Buddha Purnima</b>
16.5.22	2 <sup>nd</sup>	• Application of Bio gas
to	3 <sup>rd</sup>	• Continue
21.5.22	4 <sup>th</sup>	• Bio diesel
	5 <sup>th</sup>	• Bio diesel Application
	6 <sup>th</sup>	• continue
	1 <sup>st</sup>	• Other Energy Sources
23.5.22	2 <sup>nd</sup>	• other Energy sources
to	3 <sup>rd</sup>	• Tidal energy, energy from the tides,
28.5.22	4 <sup>th</sup>	• Bannage & non Bannage Tidal Power Plant
	5 <sup>th</sup>	• continue
	6 <sup>th</sup>	• Ocean Thermal Energy Conversion (OTEC)
	1 <sup>st</sup>	<b>Sabitri Amabasya</b>
30.5.22	2 <sup>nd</sup>	• OTEC
to	3 <sup>rd</sup>	• Geothermal Energy
04.06.22	4 <sup>th</sup>	• Geothermal energy classification
	5 <sup>th</sup>	• Hybrid Energy systems
	6 <sup>th</sup>	• Diesel - PV
	1 <sup>st</sup>	• Wind - PV
06.06.22	2 <sup>nd</sup>	continue
to	3 <sup>rd</sup>	• Microhydel - PV
11.06.22	4 <sup>th</sup>	• Electric Vehicles
	5 <sup>th</sup>	• Hybrid electric vehicles
	6 <sup>th</sup>	continue

Verified  
  
 10/03/22