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10611

Code : 15ME63C

Register Number | | | | | | | | | | |

VI Semester Diploma Examination, Oct./Nov.-2019

RENEWABLE ENERGY RESOURCES

Time : 3 Hours] **[Max. Marks : 100**

Note : (i) Answer any **six** questions from Part – **A**.

(ii) Answer any **seven** questions from Part – **B**.

PART – A

1. Explain the necessity of energy conservation and its various aspects. **5**

2. List the advantages and limitations of non-conventional energy sources. **5**

3. Explain the concept of Renewable energy. **5**

4. Explain Diffused & Global Radiation. **5**

5. Explain Solar Energy & Solar Constant. **5**

6. Explain briefly about bio diesel plant. **5**

7. List the advantages & disadvantages of Geo-thermal energy forms. **5**

8. Define seebeck Effect and Peltier Effect. **5**

9. Classify the different types of fuel cells. **5**

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PART – B

10.	(a)	List the categories of Energy storage system.	3
	(b)	Explain lead acid battery with a neat sketch.	7
11.	(a)	List the applications of Solar Energy.	5
	(b)	Explain Pyranometer.	5
12.	(a)	Sketch typical liquid flat plate collector.	3
	(b)	Explain the principle of Solar electric power generation.	7
13.	(a)	Explain the basic principle of wind energy conversion.	5
	(b)	List the factors required in site for Installing the wind turbine.	5
14.	(a)	List the advantages and limitations of horizontal wind turbine.	5
	(b)	Explain with neat sketch the vertical axis wind system.	5
15.	(a)	Explain any two biomass conversion processes.	5
	(b)	List the factors affecting biogas generation.	5
16.	(a)	Explain fermentation process.	3
	(b)	Explain with a neat sketch floating drum type biomass plant.	7
17.	(a)	List the applications of Geo-thermal energy.	3
	(b)	Explain with a neat sketch liquid dominated system of Geo-thermal energy.	7
18.	(a)	List the limitations of tidal power.	4
	(b)	Explain the basic principle of tidal power.	6
19.	(a)	Explain briefly thermo-ionic generation of power.	4
	(b)	Explain the principle of operation of fuel cell.	6