TED(21) 6012A
(Revision–2021)

Reg.No……
Signature…….

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY /MANAGEMENT/COMMERCIAL PRACTICE, APRIL– 2025

Renewable Energy and Environment

[MaximumMarks:**75**] [Time:**3** Hours]

PART-A

I. Answer *all* the following questions in one word or one sentence. Each question carries *'one'* mark. (9x1=9Marks)

		Module Outcomes	Cognitive level
1.	Write the two sources of energy	M1.01	R
2.	Define Non-renewable energy	M1.01	U
3.	Define Solar Radiation Geometry	M2.01	U
4.	Define Passive Solar Energy	M2.02	U
5.	List Horizontal axis turbines	M3.02	R
6.	What is Wind Pump for irrigation	M3.03	U
7.	List any two examples for Gaseous Biomass fuels	M4.02	R
8.	Define Economics of Renewable energy	M1.04	U
9.	Write the examples of Liquid Biomass fuels	M4.02	R

PART-B

II. Answer any *eight* questions from the following. Each question carries *'three'* marks.

(8x3=24 Marks)

		Module Outcomes	Cognitive level
1.	Write the Achievements of Renewable energy	M1.04	R
2.	List any six applications of Renewable energy	M1.04	U
3.	Define Solar Radiation and solar radiation at earth's surface	M2.01	U
4.	Write the six Solar Radiation Geometry	M2.01	U
5.	Explain any three Limitations of Renewable energy	M3.04	R
6.	List the cost of any three Renewable Energy Technology and explain any one	M3.04	U
7.	Explain any three properties of Solid Biomass Fuel	M4.02	R
8.	List the properties of Liquid Biomass Fuel	M4.02	R
9.	What are the criteria for selecting an appropriate site for Wind mills	M3.02	U
10.	List out the municipal solid waste	M4.02	R

PART-C

III. Answer all questions. Each question carries *'seven'* marks

(6x7=42 Marks)

		Module Outcomes	Cognitive level
III.	Explain the Reserves of energy sources **OR**	M1.01	U
IV.	Explain Geothermal energy and fundamentals	M1.03	A
V.	Explain the differences of Solar thermal and PV **OR**	M2.03	U
VI.	Explain the four PV technologies and Services of Solar thermal system	M2.04	A
VII.	Explain Wind data and Energy Estimation **OR**	M3.01	U
VIII.	List the Advantages and Disadvantages of Wind Energy	M3.02	U
IX.	Draw the layout of Bio combustion plant and explain the Thermo-chemical based power plant **OR**	M4.03	A
X.	Explain Agro-chemical based power plant	M4.04	A
XI.	Explain Renewable energy Scenario of India and World **OR**	M1.02	U
XII.	Explain the classifications of Solar energy	M2.02	U
XIII.	Describe Wave Energy **OR**	M3.03	A
XIV.	List out the applications of Bio energy	M4.01	U