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.	What is energy	M1.01	R
2.	Define Renewable energy	M1.01	R
3.	Define Solar Radiation	M2.01	R
4.	Define Active Solar Energy	M2.02	R
5.	Write the classification of wind mills	M3.02	U
6.	List Vertical axis turbines	M3.02	R
7.	List any two sources of Bio energy	M4.01	R
8.	Write the classifications of Wood in Biomass	M4.04	U
9.	Write any two achievements of Renewable Energy system	M1.04	U

PART-B

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

(8x3=24 Marks)

		Module Outcomes	Cognitive level
1.	Write any six Applications of Renewable energy	M1.04	U
2.	Explain the Economics of Renewable energy	M1.04	U
3.	Explain solar radiation at earth's surface	M2.01	A
4.	List the six Solar Radiation Geometry	M2.01	U
5.	Briefly explain the cost of any two Renewable Energy Technology	M3.04	A
6.	Explain any three common Barriers of Renewable Energy	M3.04	U
7.	List the components of Agro-chemical based power plant	M4.04	U
8.	Define Biomass Direct Combustion and list the components	M4.04	U
9.	Explain Photovoltaic Cell	M2.02	A
10.	Write the process of Agro-chemical based power plant	M4.04	A

PART-C

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

(6x7=42 Marks)

		Module Outcomes	Cognitive level
III.	Explain solar energy and fundamentals	M1.03	A
	OR		
IV.	Write the benefits of Renewable energy	M1.02	U
V.	Explain the classifications solar energy	M2.02	A
	OR		
VI.	Explain Rooftop solar PV system	M2.04	A
VII.	Explain Wind Map of India	M3.01	U
	OR		
VIII.	Write the working of Wind Turbine Generator	M3.02	A
IX.	Draw the layout of Biogas plant and explain the Bio-chemical based power plant	M4.03	A
	OR		
X.	Write the Applications of Bio Energy	M4.01	U
XI.	Explain World Energy Use	M1.01	U
	OR		
XII.	Differentiate solar thermal and PV	M2.03	U
XIII.	Describe Tidal Energy	M3.03	A
	OR		
XIV.	Explain the properties of solid, liquid and gaseous fuel for biomass power plants	M4.02	U