

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY  
/MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER –  
2024**

**CIVIL ENGINEERING  
Renewable Energy Technologies**

[Maximum Marks:75]

[Time:3Hours]

**PART-A**

**I. Answer all the following questions in one word or one sentence. Each question carries 'one' mark.**

(9x1=9Marks)

Module Outcome Cognitive level			
1.	What is Renewable source of energy	M1.01	U
2.	Define cogeneration	M1.02	U
3.	Define Solar Radiation	M2.01	U
4.	Types of solar collectors	M2.02	U
5.	Write any two energy management techniques	M1.03	U
6.	Define combustion	M3.02	U
7.	Write the two classification of wind mills	M3.01	U
8.	Define geothermal energy	M4.01	U
9.	Full form of MHD	M4.02	U

**PART-B**

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

(8x3=24Marks)

Module Outcome Cognitive level

1.	Write the sources of Non-renewable energy	M1.01	U
2.	Write the classifications of energy audit	M1.02	U
3.	Write the advantages and disadvantages of wind energy	M3.01	U
4.	What are the difference between horizontal and vertical axis wind mills	M3.01	U
5.	List the Concept of energy management	M1.03	U
6.	Explain high speed propeller	M3.02	U
7.	List the six solar radiation geometry	M2.01	U
8.	Applications of Dry rock system	M4.01	U
9.	Principle of MHD	M4.02	U
10.	Write the applications of solar energy	M2.03	U

**PART-C**

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

**(6x7=42Marks)**

ModuleOutcomeCognitivelevel

III.	Renewable and non-renewable energy	M1.01	U
	<b>OR</b>		
IV.	Point out energy conservation techniques Explain	M1.02	U
V.	Explain Parabolic trough collectors and Draw the figure	M2.02	U
	<b>OR</b>		
VI.	Explain Solar pumping and Draw the figure	M2.03	U
VII.	Write the Criteria for selection of sites for wind mills	M3.01	U
	<b>OR</b>		
VIII.	Explain the wind mills	M3.01	U
IX.	Explain Fuel cell	M4.03	U
	<b>OR</b>		
X.	Explain MagnetoHydroDynamic power generation	M4.02	U
XI.	Explain geothermal extraction	M4.01	U
	<b>OR</b>		
XII.	Draw the figure of flat plate collector and explain the working	M2.02	U
XIII.	Explain the different energy management techniques Analysis of input, Reuse and recycling of waste, Energy education, Conservative technique and energy audit.	M1.03	U
	<b>OR</b>		
XIV.	Explain Bio diesel	M3.02	U