K. K. Wagh Institute of Engineering Education & Research, Nashik

(An Autonomous Institute From A.Y. 2022-23)

WINTER-2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:VI
Class:TY	Program:B.Tech
Branch Code:CHE	Pattern:2022
Name of Course:Renewable Energy	Course Code:CHE223014(A)
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains _____page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

		Marks	CO
Question No. 1			
1a)	What are the advantages and limitation of Renewable energy sources?	(6)	CO1
Question No. 2			
2a)	What are the main applications of Biogas?	(6)	CO2
Question No. 3			
3a)	How solar air collectors are classified? What are the main applications of drier?	(8)	CO3
	OR		
3b)	What do you mean by a green house? Enumerate the main types of green houses.	(8)	CO3
3c)	What are the main applications of a solar pond?	(8)	CO3
	OR		
3d)	What is principle collection of solar energy used in a non-convective solar pond? Describe non-convective solar pond for solar collection and storage.	(8)	CO3
Question No. 4			
4a)	Explain the method of converging waste into energy by incineration.	(8)	CO4
	OR		
4b)	Explain the method of converging waste into energy by anaerobic digestion.	(8)	CO4
4c)	Explain the process of gasification in detail.	(8)	CO4
	OR		
4d)	Write a note on industrial waste and its classification.	(8)	CO4
Question No. 5			

5a)	Describe Thermo-chemical method for hydrogen production.	(8)	CO5

OR

5b)	What are the different methods for hydrogen Storage? Describe their advantages and disadvantages.	(8)	CO5
5c)	Write the main applications of hydrogen gas.	(8)	CO5

OR

5d)	Write a note on Fossil fuel method of H2 production.	(8)	CO5

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