

U.S.N.

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

January / February 2025 Semester End Main Examinations**Programme: B.E.****Semester: VII****Branch: Institutional Elective****Duration: 3 hrs.****Course Code: 23CY7OEGET****Max Marks: 100****Course: Green Energy Technology**

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.			UNIT - I	CO	PO	Marks
	1	a)	Illustrate the role of green energy in economic development	CO1	PO1	6
		b)	Explain the advantages and challenges of Wind Power.	CO1	PO2 PO7	6
		c)	Elaborate on the green Energy social transformation. Discuss with the suitable example.	CO1	PO1 PO7	8
			OR			
	2	a)	Differentiate green energy and clean energy.	CO1	PO1	6
		b)	Describe the factors affecting green energy technology.	CO1	PO1	8
		c)	Explain the basic Principle of Hydropower.	CO1	PO1	6
			UNIT - II			
	3	a)	Discuss the challenges involved in implementation of green energy management.	CO1	PO1 PO7	8
		b)	Elaborate on the harvesting of green energy through waste.	CO1	PO1 PO7	6
		c)	Discuss the advantages and disadvantage of waste-to-energy.	CO1	PO1	6
			OR			
	4	a)	Write a note on green energy management in India.	CO1	PO1 PO7	6
		b)	Describe the importance of hazardous materials disposal	CO1	PO1	6
		c)	Illustrate the golden rules of green energy technology.	CO1	PO1	8
			UNIT - III			
	5	a)	Compare solar cell and Photovoltaic cell.	CO1	PO1	6

	b)	Explain the components and working of windmill.	CO1	PO1	6
	c)	Illustrate the factors affecting the conversion efficiency of mechanical energy captured by wind blades into electrical energy.	CO1	PO1 PO7	8
		OR			
6	a)	Describe the construction and working of photovoltaic cell.	CO1	PO1	8
	b)	Classify biogas plants with suitable examples.	CO1	PO1 PO7	6
	c)	Discuss the advantage and disadvantage of biogas.	CO1	PO1	6
		UNIT - IV			
7	a)	Discuss the types of biofertilizers and mention its benefits.	CO1	PO1	6
	b)	Define bioremediation. Discuss its advantages and applications.	CO1	PO1	8
	c)	Appraise the statement: Hydrogen is an alternative fuel resource.	CO2	PO2	6
		OR			
8	a)	Outline the classification of biopesticides. List benefits and applications.	CO1	PO1	8
	b)	Brief the waste-to-energy technologies.	CO1	PO1	6
	c)	Discuss the difference between green battery and traditional battery.	CO1	PO1	6
		UNIT - V			
9	a)	Brief the solid fuel utilization with carbon capture.	CO1	PO1 PO7	6
	b)	Discuss the benefits of LED Lighting.	CO1	PO1 PO7	8
	c)	Define carbon footprint. How to measure carbon footprint.	CO1	PO1 PO7	6
		OR			
10	a)	Describe the biomass carbon removal and storage.	CO1	PO1 PO7	6
	b)	Discuss the advantage and disadvantage of vertical farming.	CO1	PO1	6
	c)	Elaborate on the pollution risk management with appropriate examples.	CO1	PO1 PO7	8
