

End Semester/Reappear (Semester IV) Examination May 2025
Programme: B. Sc. (Hons.) Agriculture
Course: Renewable Energy Green Technology
Course Code: 13A.260
Enrolment no. _____
Full Marks: 50
Time: 2 Hrs.

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks
Section I				
1	Short Answer type questions.			
a	Enlist advantages and disadvantages of Non-conventional sources of energy.	CO1	Remember	4 x 5 = 20
	or			
b	Discuss the types of conventional energy source.	CO1	Understand	
	or			
	Discuss pros and cons of solar energy to be used as a renewable source of energy.	CO2	Understand	
c	Express the drawbacks of open sun drying in your own words.	CO2	Understand	
	or			
	Explain wind rotors and write down its characteristics.	CO3	Understand	
d	or			
	Define wind energy and its role in agriculture.	CO3	Remember	
	Discuss the different fermentation methods of ethanol production from biomass.	CO4	Understand	
	or			
	Sketch a fixed dome biogas plant (Janata model) with proper labelling.	CO4	Apply	
Section II				
Long Answer type questions.				2 x 15 = 30
2	a. Explain different types of solar cooker along with its design.	CO2	Analyze	10
	b. Illustrate semiconductor and describe its types.	CO1	Apply	5
	or			
	a. Design the operation of a solar cooker and a solar water heater.	CO2	Create	10
	b. Enlist components of solar panel.	CO2	Understand	5
3	a. Design a plan how biogas is produced through different biological processes from biomass.	CO4	Create	10
	b. Describe the steps of waste to energy.	CO4	Remember	5
	or			
	a. Explain Gasifiers and gasification processes along with conversion efficiency.	CO4	Analyze	10
	b. Prepare a flow chart of different biomass resources.	CO4	Apply	5

Course Outcome:

At the end of the course the students will be able to-

CO1 Understand the importance of bioenergy sources and their contribution to agriculture sectors /agricultural field.

CO2 Illustrate the concept and application of solar energy and its various gadgets.

CO3 Understand wind energy and its application.

CO4 Exercise functioning and utilization of renewable energy sources to promote green technology in agricultural field.