

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025

Seventh Semester

Agricultural Engineering

OCH353 - Energy Technology

Regulations - 2021

Duration: 3 Hrs

Maximum Marks: 100

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

Q.No	Questions	BLT	CO	Marks
1.	Write about the potential of various renewable energy sources in India.	L2	1	2
2.	Differentiate commercial & non-commercial energy.	L2	1	2
3.	Analyze the three main factors of power output of hydel plant.	L2	2	2
4.	What are the fuels used in nuclear power plants?	L1	2	2
5.	Write the significance of solar thermal energy.	L1	3	2
6.	Define geothermal energy.	L2	3	2
7.	Discuss about pyrolysis.	L1	4	2
8.	Name the six factors affecting biogas production.	L2	4	2
9.	Explain the types of energy audits.	L3	5	2
10.	Give the basic principle of material and energy balance.	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BLT	CO	Marks
11.	a Discuss in detail about Global primary energy reserves and consumption.	L2	1	16
	Or			
	b What are the methods of direct and indirect energy conversion? Describe in detail.	L2	1	16
12.	a Draw the schematic diagram of a modern steam power station and explain its operation.	L3	2	16
	Or			
	b i Discuss the types of fluidized bed combustion.	L3	2	8
	ii Discuss the merits and demerits of FBC	L3	2	8

13.	a	What is wind power and derive the equation of power in wind.	L4	3	16	
Or						
	b	Enlist different geothermal resources and explain heat extraction from hot dry rocks.	L4	3	16	
14.	a	i	Discuss different biomass conversion technologies in detail.	L3	4	8
		ii	Differentiate the following methods of biogas generation	L3	4	8
		a.	Pyrolysis			
		b.	Combustion.			
Or						
	b	List Indian types of biogas plant and explain any two with neat sketches.	L3	4	16	
15.	a	Elaborately discuss about energy conservation act, 2001 and its features.	L3	5	16	
Or						
	b	Detailly explain the various instruments and monitoring systems followed in auditing.	L3	5	16	