



R18 Regulation

Subject code:206CB

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VI Semester Supplementary Examinations, November 2025

## SOLAR ENERGY APPLIANCES

(ME)

Maximum Marks: 70

Date: 15.11.2025

Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
  2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
  3. Part B consists of 5 Units. Answer any one full question from each unit.
  4. Each question carries 10 marks and may have a, b, c, d as sub questions.

### Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	What is Solar Cell?	2M	1	L1
2	Write a short notes on Solar Lanterns	2M	1	L1
3	List out different applications of Solar Lighting systems	2M	2	L1
4	How do you determine the Cooking Time for food products?	2M	2	L1
5	What is solar drying list the advantages and disadvantages of solar drying?	2M	3	L1
6	What are the main applications of a solar dryer?	2M	3	L1
7	Explain the necessity of Solar Desalination	2M	4	L1
8	Write a short notes on Solar disinfection	2M	4	L1
9	Explain about Heliostat.	2M	5	L1
10	State the components of a Solar furnace	2M	5	L1

### Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Discuss about Solar Home Lighting Systems	10M	1	L2
	OR			
12	Sketch and explain about Solar Lanterns	10M	1	L2
13	Discuss about Rural electrification process with a case study.	10M	2	L2
	OR			
14	Explain the advantages, disadvantages and applications of Solar cooking systems?	10M	2	L2
15	Discuss about Solar timber drying system?	10M	3	L2
	OR			
16	Discuss about Forced circulation type solar dryer?	10M	3	L2
17	Differentiate between conventional and solar desalination	10M	4	L2
	OR			
18	Explain about wick type solar still with example?	10M	4	L2
19	Explain single concentrator furnaces with neat sketch	10M	5	L2
	OR			
20	Explain any two case studies on solar furnaces.	10M	5	L2