R18 Regulation *Subject code:2O5BD*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, November 2025

NON-CONVENTIONAL POWER GENERATION

(EEE)

Maximum Marks: 70 Date:12.11.2025 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	Define solar altitude angle	2M	1	L1
2	What are the advantages of renewable energy sources	2M	1	L1
3	What are the applications of solar air heaters	2M	2	L1
4	What are the main components of a flat plate solar collector	2M	2	L1
5	List Any two application of wind power?.	2M	3	L1
6	How to generate the geothermal.	2M	3	L1
7	What is the biomass?	2M	4	L1
8	What is geothermal power?	2M	4	L1
9	What is OTEC open cycle	2M	5	L1
10	What are the applications of fuel cells?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Explain the working of a Pyreheliometer.	10M	1	L2
	OR			
12	What is meant by solar radiation data and explain in detail.	10M	1	L2
13	List the advantages of concentrating collectors over flat plate collectors.	10M	2	L2
	OR			
14	Explain with a neat sketch the working principle of standalone and grid Connected solar system.	10M	2	L2
15	Discuss about Magma Resources.	10M	3	L2
	OR			
16	What are the instruments are used for measurement of solar energy with neat diagrams.	10M	3	L2
17	Explain the classification of biogas plants.	10M	4	L2
	OR			
18	Explain how electrical energy can be generated from geo thermal energy	10M	4	L2
19	Explain the components of tidal power plants.	10M	5	L2
	OR			
20	Explain the working of a thermo electric generator.	10M	5	L2