R20 Regulation *Subject code: 3O6BE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, April 2026

RENEWABLE ENERGY SOURCES

(EEE)

Maximum Marks: 70 Date: 25.04.2026 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 Electrical Grid?	2M	1	L1
2	What is Distributed Generation?	2M	1	L1
3	Write the principle of wind Turbines.	2M	2	L1
4	What is photovoltaic effect?	2M	2	L1
5	Draw the Characteristics of the PV cell.	2M	3	L1
6	Write about Power losses in Induction generator.	2M	3	L1
7	Write the operation of Fly wheel energy storage method.	2M	4	L1
8	Write short note on Energy storage parameters.	2M	4	L1
9	Define Instantaneous Active and Reactive power.	2M	5	L1
10	Write about Distributed generation.	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Explain demand and supply side management of electricity power generation.	10M	1	L2
	OR			
12	Explain different types of wind turbines with advantages and disadvantages.	10M	1	L2
13	Explain the operation of Solar power generation with neat diagram	10M	2	L2
	OR			
14	Discuss the low and high temperature Fuel cells.	10M	2	L2
15	Explain the Principle and working of An Induction motor.	10M	3	L2
	OR			
16	Explain different types of energy storage methods.	10M	3	L2
17	Explain how energy storage is an Economic resource.	10M	4	L2
	OR			
18	Write short note on Energy storage parameters and explain the working of Lead Acid battery.	10M	4	L2
19	Explain the Instantaneous Active and reactive power control approach in the Integration of Renewable Energy sources	10M	5	L2
	OR			
20	Write short note on a) Distributed Generation b) Power Injection	(5+5)M	5	L2