



R20 Regulation

Subject code:306BE

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, December 2024

RENEWABLE ENERGY SOURCES (EEE)

Maximum Marks: 70

Date:09.01.2025

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 which carries 10M.
 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)		CO	Bloom Tx
1	What is Electrical Grid?	1	L1
2	What is Distributed Generation?	1	L1
3	Explain general classification of wind Turbines?	2	L1
4	Explain the proton exchange membrane of Fuel cells?	2	L1
5	Explain the stand alone operation of Induction generator?	3	L1
6	Write short note on Power losses in Induction generator?	3	L1
7	Explain the operation of Fly wheel energy storage method?	4	L1
8	Write short note on Energy storage parameters	4	L1
9	Define Instantaneous Active And Reactive power	5	L1
10	Write short note Distributed generation?	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	Explain Demand and supply side management of electricity power generation? [10M]	1	L2
OR			
12	Write short note on different types of wind turbines? [10M]	1	L2
13	Draw the equivalent circuit of PV cell and explain its characteristics? [10M]	2	L2
OR			
14	Explain the constructional features of the Proton Exchange membrane Fuel cell? [10M]	2	L2
15	Explain the Principle and working of An Induction motor? [10M]	3	L2
OR			
16	Draw and explain the Magnetization curves of the Induction motor? [10M]	3	L2
17	Explain the energy storage systems A) Compressed air storage system [5M] B) Super conducting magnetic storage system [5M]	4	L2
OR			

18	Write short note on Energy storage parameters ? Explain the working of Lead Acid battery ? [10M]	4	L2
19	Explain the principles followed for the integration of the Renewable energy sources? [10M]	5	L2
	OR		
20	Explain the principles of Power Injection? What is Islanding of Power? [10M]	5	L2