



R20 Regulation

Subject code:305BA&305GA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, December 2024

SMART GRID TECHNOLOGIES

(Common to EEE & CSE (AIML))

Maximum Marks: 70

Date:08.01.2025

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	Define Smart Grid?	1	L1
2	Give four examples of smart appliances?	1	L1
3	Define Geographic Information Systems(GIS)?	2	L1
4	What is phase Measurement Unit(PMU)?	2	L1
5	Define Captive power plants?	3	L1
6	List out the benefits Plastic & Organic solar cells?	3	L1
7	List out the Power Quality Conditioners?	4	L1
8	Define EMC in Smart Grid?	4	L1
9	Define Cyber Security for Smart Grid?	5	L1
10	What are the Basics of CLOUD Computing?	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	What is the Need of Smart Grid in present generation? [10M]	1	L2
OR			
12	Explain about the Plug in Hybrid Electric Vehicles(PHEV)? [10M]	1	L2
13	Explain about Pumped Hydro system? [10M]	2	L2
OR			
14	Explain about Wide Area Measurement System(WAMS)? [10M]	2	L2
15	Explain the Concept of micro-grid? [10M]	3	L2
OR			
16	What is the need & applications of micro-grid? [10M]	3	L2
17	Explain in detail about Web based Power Quality monitoring? [10M]	4	L2
OR			
18	Discuss in detail about Power Quality Audit? [10M]	4	L2
19	Explain about Wireless Mesh Network Wireless Mesh Network? [10M]	5	L2
OR			
20	Explain Broadband over Power line (BPL). [10M]	5	L2