



R20 Regulation

Subject code: 306HC

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A+' Grade)
B.Tech VI Semester Supplementary Examinations, February 2024

SMART GRID TECHNOLOGIES
(CSE(DS))

Maximum Marks: 70

Date:24.02.2024 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)		Bloom's Tx	CO
1	Define Automatic Meter Reading (AMR).	L1	CO1
2	What is Feeder Automation?	L3	CO1
3	What is Smart storage like Battery?	L1	CO2
4	Give four applications of IED's	L1	CO2
5	Difference between fuel-cells and Solar cells in two points?	L3	CO3
6	Define Power Quality Audit?	L2	CO3
7	Give four Power Quality issues of Grid?	L1	CO4
8	Define EMC.	L2	CO4
9	Expand HAN and NAN?	L1	CO5
10	What are the basics of CLOUD Computing?	L2	CO5

Part-B

Answer All the following questions. (5X10M=50Marks)		Bloom's Tx	
11	What is the Need of Smart Grid in present generation? [10]	L1	CO1
OR			
12	Explain about the Plug in Hybrid Electric Vehicles(PHEV)? [10]	L3	CO1
13	Explain the concept of Intelligent Electronic Devices(IED) & their applications for monitoring& protection. [10]	L3	CO2
OR			
14	Explain about the Wide Area Measurement System(WAMS)? [10]	L2	CO2
15	Explain the Concept of micro-grid? [10]	L3	CO3
OR			
16	What is the need & applications of micro-grid? [10]	L1	CO3

17	Explain in detail about Web based Power Quality monitoring? [10]	L2	CO4
	OR		
18	Discuss in detail about Power Quality Audit? [10]	L1	CO4
19	Difference between Network(NAN), Wide Area Network (WAN), Bluetooth, ZigBee in four points? [10]	L3	CO5
	OR		
20	Explain Broadband over Power line (BPL). [10]	L3	CO5