



R20 Regulation

Subject code: 306HC

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VI Semester Supplementary Examinations, July 2024
SMART GRID TECHNOLOGIES
(CSE(DS))

Maximum Marks: 70

Date:30.07.2024 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)

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|----|---|
| 1 | Define Automatic Meter Reading (AMR). |
| 2 | What is Feeder Automation? |
| 3 | What is Smart storage like Battery? |
| 4 | What is phase Measurement Unit (PMU)? |
| 5 | Define Captive power plants. |
| 6 | Define Power Quality Audit. |
| 7 | Define Smart Grid. |
| 8 | Define EMC. |
| 9 | Expand HAN and NAN. |
| 10 | What are the Basics of CLOUD Computing? |

Part-B

Answer All the following questions. (5 X 10M=50Marks)

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|----|---|
| 11 | What is the Need of Smart Grid in present generation? [10] |
| | OR |
| 12 | Explain about the Plug in Hybrid Electric Vehicles (PHEV). [10] |
| 13 | Explain the concept of Concept Intelligent Electronic Devices (IED) & their applications for monitoring& protection. [10] |
| | OR |
| 14 | Explain about the Wide Area Measurement System (WAMS). [10] |
| 15 | Explain the Concept of micro-grid. [10] |
| | OR |
| 16 | Explain about Variable speed wind generators. [10] |

17	What are the Power Quality issues of Grid connected Renewable Energy Sources? [10]
	OR
18	Discuss in detail about Power Quality Audit. [10]
19	Difference between Network(NAN), Wide Area Network (WAN), Bluetooth, ZigBee in four points? [10]
	OR
20	Explain Broadband over Power line (BPL). [10]