



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

Accredited by NAAC-UGC with 'A++' Grade (Cycle III) &

Accredited by NBA (B.E - CSE, EEE, ECE, Mech & B.Tech.IT)



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

QUESTION BANK

19EEE308 - SMART GRID

UNIT V - INFORMATION AND COMMUNICATION TECHNOLOGY

Part A (2 Marks)

1. What is Advanced Metering Infrastructure (AMI)?
2. Define Home Area Network (HAN) in Smart Grid.
3. What is Neighborhood Area Network (NAN)?
4. Define Wide Area Network (WAN) in the context of Smart Grid.
5. What are the major communication technologies used in Smart Grid?
6. Define the role of Bluetooth in Smart Grid communication.
7. What is Zigbee technology, and where is it used in Smart Grids?
8. How does GPS contribute to Smart Grid communication?
9. What is the significance of Wi-Fi in Smart Grid applications?
10. Define Wi-Max and its role in Smart Grid networks.
11. How does cloud computing benefit Smart Grid operations?
12. What is the function of blockchain technology in Smart Grids?
13. Define the importance of cyber security in Smart Grid communication.
14. What are the challenges in implementing Smart Grid communication networks?
15. Explain the role of IoT in Smart Grid communication.
16. What is the purpose of real-time data monitoring in Smart Grid?
17. How does artificial intelligence (AI) contribute to Smart Grid communication?
18. Define SCADA and its role in power grid monitoring.
19. What is the function of smart gateways in a Smart Grid network?
20. How does machine learning improve Smart Grid operations?

Part B (16 Marks)

1. Explain the different communication technologies used in Smart Grids.
2. Discuss in detail the role of Advanced Metering Infrastructure (AMI) in Smart Grids.
3. Explain the concept of Home Area Network (HAN), Neighborhood Area Network (NAN), and Wide Area Network (WAN).
4. Discuss the importance of cybersecurity in Smart Grid communication.
5. How does cloud computing contribute to Smart Grid operations? Explain.
6. Explain the application of IoT in Smart Grid communication.
7. Discuss the significance of AI and machine learning in Smart Grid communication.
8. Explain the role of blockchain technology in securing Smart Grid transactions.
9. How do smart gateways enhance communication in Smart Grids?

10. Discuss the advantages and challenges of wireless communication in Smart Grid networks.