



# 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

##### Part A (2 Marks)

1. Define Smart Grid.
2. What are the key differences between conventional and smart grids?
3. List the main functions of a Smart Grid.
4. What are the opportunities of Smart Grids in India?
5. Define resilient and self-healing grids.
6. What are the major barriers to Smart Grid development?
7. Mention any two benefits of Smart Grid technology.
8. What is the significance of Smart Grid in renewable energy integration?
9. Define the concept of Smart Metering.
10. What are the key elements of a Smart Grid?
11. Mention any two case studies of Smart Grid implementation in India.
12. How does Smart Grid improve power reliability?
13. What is the role of automation in Smart Grid?
14. Define Demand Response in Smart Grids.
15. What are the key communication technologies used in Smart Grid?
16. How does Smart Grid enhance energy efficiency?
17. What is meant by the self-healing property of a Smart Grid?
18. Define the term "Grid Modernization."
19. What is the significance of ICT in Smart Grids?
20. How does Smart Grid contribute to sustainable energy development?

##### Part B (16 Marks)

1. Explain in detail the evolution of Electric Grid and the concept of Smart Grid.
2. Discuss the definitions and functions of Smart Grid with suitable examples.
3. Elaborate on the major opportunities and barriers to the development of Smart Grid.
4. Compare and contrast conventional and Smart Grids with relevant case studies.
5. Explain the concept of resilient and self-healing grids in Smart Grid technology.
6. Discuss the importance of automation in the Smart Grid framework.
7. How does Smart Grid improve the integration of renewable energy resources? Explain.
8. Explain the role of Smart Meters and Advanced Metering Infrastructure (AMI) in Smart Grid.
9. Discuss in detail the various components of a Smart Grid.
10. Explain the role of ICT and communication technologies in Smart Grid.