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B.TECH
(SEM. VII) THEORY EXAMINATION 2021-22
INTRODUCTION TO SMART GRID

Time: 3 Hours

Total Marks: 70

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

- 1. Attempt all questions in brief.** **2x7 = 14**
- Define Functions of Smart Grid.
 - What is automatic meter reading?
 - What is concept of Resilient?
 - What is CDM in smart grid?
 - Write difference between conventional & smart grid.
 - Write note on CDM opportunities in Smart Grid.
 - What is major global smart grid initiative in India?

SECTION B

- 2. Attempt any three of the following:** **7 x 3 = 21**
- Explain how the reliability of smart grid can be enhanced by integrating intelligent electronic devices (IED) into it.
 - Describe about self healing property of smart grid with block diagram.
 - Write down the comparison between conventional grid and smart grid and concept of micro grid.
 - Describe about solar cell Plastic Solar Cell and Organic Solar Cell.
 - What is the benefit of smart grid with respect to conventional electric grid?

SECTION C

- 3. Attempt any one of the following:** **7 x 1 = 07**
- Describe about Capacitive Power Plant.
 - What is Geographic Informative System (GIS)? Explain the concept of GIS.
- 4. Attempt any one parts of the following:** **7 x 1 = 07**
- Describe power quality issues of Grid Connected renewable energy sources.
 - Describe about Variable speed wind generator and Micro turbine
- 5. Attempt any one parts of the following:** **7 x 1 = 07**
- Write down a note about conditioner of Smart grid.
 - What are the major points which are the forced drivers for demanding smart grid?
- 6. Attempt any one parts of the following:** **7 x 1 = 07**
- What is web based Power Quality Monitoring?
 - Define EMC in SMART GRID.
- 7. Attempt any one parts of the following:** **7 x 1 = 07**
- Describe about the issues of interconnection and protection in micro grid?
 - What is the meaning of wide area measurement system (WAMS)? Elaborate it.