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GIET UNIVERSITY, GUNUPUR – 765022
M. Tech (Second Semester Examinations) – October' 2021
MPEPE2043 – SMART GRIDS
 (Power Electronics)

Time: 2 hrs

Maximum: 50 Marks

(The figures in the right hand margin indicate marks)

PART – AQ.1. Answer **ALL** questions

(2 x 10 = 20)

- Briefly explain self-healing?
- Write any two differences between conventional and smart metering?
- Explain the need of smart grid?
- What is smart sensor?
- List out the technologies under smart grid distribution system?
- Explain series PHEV
- What is Phase Shifting Transformer? Write two applications of it.
- What are Intelligent electronic devices?
- What do you mean by isolation and restoration?
- Write the different components for fault restoration.

PART – B**(6 x 5 = 30 Marks)**Answer **ANY FIVE** questions

Marks

- Describe the power quality issues of grid connected renewable energy sources. (6)
- Explain the power quality audit and its importance in smart grid. (6)
- Write short notes on: (6)
 - Energy efficiency in smart grid
 - opportunity and barriers in Smart Grid
- Explain the subsystems of smart sensors (6)
- Explain about sensing, measurement, control and automation technologies (6)
- Briefly explain feeder automation. (6)
- Describe fault diagnosis and fault location. (6)

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