PVP 14

Code: EE8T2C

IV B.Tech - II Semester – Regular / Supplementary Examinations
MAY-2022

SMART GRID
(ELECTRICAL & ELECTRONICS ENGINEERING)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11 x 2 = 22 M

1.

a) List the functions of smart grid.

b) What are the various smart grid components?

c) What is GIS Technology?

d) Explain about evolution of smart meters.

e) What is contingency?

f) Describe performance indices.

g) Define voltage stability.

h) Define steady state stability.

i) What is linear programming in smart grid?

j) List different optimization techniques for smart grid development.

k) Give applications of phasor measurement unit.

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Define smart grid and describe the necessity for smart grid. 8 M

   b) Describe the necessity of computational intelligence in smart grid environment. 8 M

3. a) Examine the wide area monitoring system in a transmission network. 8 M

   b) What is MAS technology? Discuss. 8 M

4. a) Discuss various contingency studies in smart grid. 8 M

   b) Explain load flow state in smart grid. 8 M

5. a) Explain briefly about Voltage stability assessment. 10 M

   b) What is meant by Voltage stability indexing. Discuss the methodology. 6 M

6. a) Write the steps involved in dynamic programming technique applied in smart grid. 10 M

   b) What are Decision support tools in smart Grid. 6 M