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SEAT No. :

PB-276

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B.E. (Electrical Engineering) (Insem)

SMART GRID

(2019 Pattern) (Semester - VIII) (403150C) (Elective - V)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Solve Q1 or Q2, Q3 or Q4.*
- 2) *Figures to the right indicate full marks.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Assume suitable additional data, if necessary.*
- 5) *Use of non-programmable calculator is allowed.*

Q1) a) Explain in detail about the Architecture of the Smart Grid. **[8]**

b) Explain opportunities and barriers of smart grid. **[7]**

OR

Q2) a) Explain neatly about the Smart Grid Roadmap for INDIA. **[8]**

b) Explain the concept of resilient and self-healing grid. **[7]**

Q3) a) Draw the Structure PMU neatly and explain in detail about the functions of PMU. **[7]**

b) Explain substation and feeder automation. **[8]**

OR

Q4) a) Compare SMES, Super capacitors, Pumped Hydro and compressed air energy storage. **[7]**

b) Explain how the reliability of smart grid can be enhanced by Integrating IED in to it. **[6]**

c) Differentiate between PHEVs and EVs. **[2]**
