

**M. TECH.-IV (ELECTRICAL -POWER SYSTEM) (CBCS – 2015  
COURSE) : SUMMER - 2018**  
**SUBJECT: SELF-STUDY PAPER – II : SMART GRID : AUTOMATION SYSTEM FOR  
STATE TRANSMISSION UTILITY**

Day : **Tuesday**  
Date : **19/06/2018**

**S-2018-3157**

Time : **11.00 AM TO 02.00 PM**  
Max. Marks : 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Answers to both the sections should be written in **SEPARATE** answer book.
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**SECTION – I**

**Q.1** What will be the components of Smart Grid? Explain in detail. **(10)**

**OR**

Explain difference between Conventional and Smart Grid.

**Q.2** Explain Smart meters and give its functions, when deployed in domestic sector. **(10)**

**OR**

Write a note on PHEV.

**Q.3** Explain importance of Smart Substation. **(10)**

**OR**

Write a short note on IED.

**SECTION – II**

**Q.4** Explain formation of Micro Grid. **(10)**

**OR**

Give issues of Interconnections in Micro Grids.

**Q.5** Discuss Power Quality issues in Smart Grid. **(10)**

**OR**

Explain procedure to conduct Power Quality Audit in Smart Grid.

**Q.6** State the necessity of Cyber Security in Smart Grid. **(10)**

**OR**

Compare the following:

- a) Zig-Bee and WiFi
- b) Wi-Max and Bluetooth

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