

Roll No. ....

**23287**

**M. Tech 2nd Semester  
(Electrical Power Systems)  
Examination – May, 2018**

**FACTS CONTROLLERS**

**Paper : MTEPS-202**

***Time : Three Hours ]***

***[ Maximum Marks : 100***

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt any *five* out of *eight* questions. All questions carry equal marks.

1. (a) Explain power flow in meshed system.  
(b) Discuss transient stability & dynamic stability.
2. Discuss basic types of facts controller in detail.
3. Discuss single phase full wave bridge converter operation. Also discuss its wave circuit, operation waveform, phase relationship between current and voltage.

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4. Describe three level voltage sourced converter.
5. Explain midpoint voltage regulation four segmentation. Also draw all possible sketches.
6. Write technical notes on :
  - (a) TCR and TSR
  - (b) TSC and TCR
7. (a) Explain significance of Power oscillation damping.  
(b) Explain static Var system
8. Write technical notes on :
  - (a) TCSC
  - (b) Central schemes for TSSC.