PVP 12

Code: **EEPC2T2**

I M.Tech - II Semester-Regular Examinations – AUGUST 2016

FACTS CONTROLLERS
(POWER SYSTEM CONTROL AND AUTOMATION)

Duration: 3 hours Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1)

a) Discuss various FACTS controllers and their control attributes. 7 M

b) Explain the power flow and dynamic stability considerations of a transmission interconnection. 7 M

2)

a) Explain the working of a voltage source three level converters. 7 M

b) Explain the basic types of current source converters with their configurations. 7 M

3)

a) What are the objectives of static shunt compensators? 7 M

b) Explain the functions of ideal midpoint reactive compensator in a two-machine power system. 7 M

4)

a) Explain the working of TSC with relevant waveforms. 7 M

b) Explain the functional control scheme for the FC-TCR. 7 M

5)

a) Discuss the basic operating principle of switching type var generators. 7 M

b) Obtain the basic block diagram of static compensators. 7 M

6)

a) Explain with the help of a block diagram representation, how the STATCOM is implemented for the transient stability enhancement during a disturbance. 7 M

b) What are the main components of complete control operation of a static compensators? Explain them. 7 M

7)

a) Explain in detail, the basic operating control scheme of TSSC. 7 M

b) Discuss the functional system control scheme for the SSSC. 7 M

8)

a) Explain the basic operating principles of voltage source converters. 7 M

b) Explain the control characteristics of TSR. 7 M