

**B.Tech. – VIEP – ELECTRICAL ENGINEERING
(BTELVI)**

Term-End Examination

00787

June, 2014

BIEEE-008 : FLEXIBLE AC TRANSMISSION SYSTEM

Time : 3 hours

Maximum Marks : 70

*Note : Attempt any **seven** questions. All questions carry equal marks. Assume missing data, if any.*

1. Describe the method of phase angle control for the series compensation of transmission line. 10
2. Explain the operation of TSC as a FACTS device. Also distinguish between the features and characteristics of SVC and STATCOM. 10
3. What is the basic principle of P and Q control ? Also explain in brief, independent real power flow control. 10
4. Enumerate various special purpose FACTS controllers. Also explain any one of them. 10
5. Describe the following in brief : 10
 - (a) Thyristor controlled voltage limiter
 - (b) Thyristor controlled voltage regulator

- 6.** Write in detail on any *two* of the following : 10
- (a) STS
 - (b) SSC
 - (c) SVR
- 7.** Distinguish between SSSC and UPFC with reference to their principle of operation and applications. 10
- 8.** Define FACTS. Also explain the interline power flow controller. 10
- 9.** Briefly describe the operation of TCVR as a FACTS device. 10
- 10.** Discuss the benefits of FACTS Transmission line compensation. Explain the operation and control of TCPAR. 10
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