

PRAGATI ENGINEERING COLLEGE: SURAMPALEM
(AUTONOMOUS)
M.Tech II Semester Regular/Supplementary Examinations, July – 2024

FLEXIBLE AC TRANSMISSION SYSTEMS
(PE&ED)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions
All questions carry EQUAL marks

Q.NO.		Question	BTL	CO	Marks
1.	a.	Explain the power flow in an AC system.	K2	CO1	6M
	b.	What are the limits of loading capability?	K2	CO2	6M
2.	a.	Explain different methods of VAR generation.	K2	CO2	6M
	b.	Explain the objectives of Shunt compensation.	K2	CO2	6M
3	a.	Explain power oscillation damping and transient stability enhancement.	K2	CO3	6M
	b.	Explain the operation of SVC and STATCOM.	K3	CO3	6M
4	a.	Explain the operation of Thyristor Controlled Series Capacitor (TCSC).	K3	CO4	6M
	b.	Explain the operation of Static Synchronous Series Capacitor (SSSC).	K3	CO4	6M
5.		What is UPFC? Why is it called unified? How active and reactive powers are controlled independently with UPFC?	K3	CO5	12M
6.	a	Explain the concept of series capacitor compensation.	K2	CO4	6M
	b	Distinguish between series and shunt compensation.	K2	CO4	6M
7	a	What are the dynamic stability considerations in selecting FACTS devices?	K2	CO1	6M
	b	What are the advantages of FACTS devices?	K2	CO1	6M
8	a	Compare between current source converters and voltage source converters.	K2	CO2	6M
	b	Explain the operating principle of IPFC.	K3	CO5	6M