Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER-VI EXAMINATION - WINTER 2015

Subject Name: Power System Practice and Design			Date:08/12/2015 Total Marks: 70	
		2:30pm to 05:00pm Total Marks:		
		Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a) (b)	Explain the advantages and disadvantages of HVDC system. Explain the various types of distribution systems.	07 07	
Q.2	(a) (b)	Explain construction of different types of cables. What are corona losses? Discuss its significance and permissible limit. Write the advantages and disadvantages of corona losses. OR	07 07	
	(b)	Write a technical note on Gas Insulated Substation.	07	
Q.3	(a)	Discuss the equipments which are used in substation, give importance of each equipment.	07	
	(b)	Discuss methods of reducing tower footing resistance. OR	07	
Q.3	(a)	What is Ferranti effect? When and how it become significant? Explain methods to reduce it.	07	
	(b)	Differentiate between shunt and series compensation.	07	
Q.4	(a)	Discuss Kelvin's law to find the most economical conductor size. What are the limitations of this law?	07	
	(b)	What is string efficiency? How it can be improved? OR	07	
Q.4	(a) (b)	Explain insulation co-ordination with curves. Explain measurement of earthing resistance.	07 07	
Q.5	(a)	What is lamp flicker? What are its causes? What type of loads are responsible for it? How can it be reduced?	07	
	(b)	Define surge impedance loading. Explain the significant of it in transmission line design.	07	
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Q.5	(a) (b)	Explain the factors while considering the size and location of substation. Explain interconnection issues of wind and solar PV with grid.	07 07	
