Seat	No.:	

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER-III EXAMINATION - SUMMER 2016

Subject Code:X30904 Date:03/06/2016

Subject Name: Electrical Power

Time:02:30 PM to 05:00 PM Total Marks: 70

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

Q.1	(a)	Explain (i) Ferranti effect (ii) Skin effect (iii) Proximity effect .	07
	(b)	Determine the inductance per km of a 3-phase transmission line using 20 mm diameter conductors when conductors are situated at the corner of a triangle with spacing of 4, 5 and 6 meters. Conductors are regularly transposed.	07
Q.2	(a)	Explain advantages of power factor improvement.	07
	(b)	Explain points to be considered while selecting site for Hydro power plant.	
		OR	
	(b)	Explain advantage of Neutral earthling.	07
Q.3	(a)	Write a short note on Arc suppression coil.	07
	(b)	State and explain methods for power factor improvement.	07
		OR	
Q.3	(a)	Draw schematic arrangement of Thermal power plant. Also state function of each part.	07
	(b)	Explain points to be considered while selecting site for Nuclear power plant.	07
Q.4	(a)	Explain schematic arrangement of hydro power plant. Also state function of each part.	07
	(b)	Write a short on Combine cycle power plant.	07
		OR	
Q.4	(a)	Write a short note on Gas turbine power plant.	07
	(b)	Explain basic construction of Cable .	07
Q.5	(a)	What is String efficiency? Derive equation of it.	07
	(b)	Explain methods to improve string efficiency.	07
		OR	
Q.5	(a)	Comparison between underground and Over head transmission system.	07
	(b)	Derive the equation of inductance for single phase 2 wire system	07
