C.U.SHAH UNIVERSITY Summer Examination-2019						
5	Subject (	Name: Inter Connected Power Sys Code: 4TE07ICP1 ::7 Date: 15/03/2019	<b>Branch: B.Tech (Electrical)</b>	Marks : 70		
I	(2) I (3) I	ons:  Jse of Programmable calculator & and answer by the structions written on main answer by the praw neat diagrams and figures (if new assume suitable data if needed.	ook are strictly to be obeyed.	nibited.		
Q-1		Attempt the following questions:		(14)		
	a) b) c) d) e) f) g) h) i) j) k) n)	The slope of the cost curve is technology to the hydro generation is a function of the equation used for determining to Generating unit is termed as The full form of STOA is Mean time to failure is represented What is meant by CONTROL ARE For inter state power transfer the critical transfer the critical capacity of hydro pow State any two disadvantages of inter that is MTIL ? What is the significance of MTIL Governor control system is	of discharge and water storathe probability of running / Failure of by A? itical parameter for monitoring is yer plant at Ukai location is er connected system.	age. of ystem.		
Attem	pt any f	Cour questions from Q-2 to Q-8				
Q-2		as 2MW and 12 MW each respective represented by a matrix $[a_i \ b_i] = [0]$	g dynamic programming method. The	ai, bi is		

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Q-3		Attempt all questions	(14)
	(a)	Describe briefly on optimal load flow solution.	<b>(7)</b>
	<b>(b)</b>	Describe the dynamic programming method for allocation of load to n no of generating units.	(7)
Q-4		Attempt all questions	(14)
	(a)	Derive the Co-ordination equation for n no. of generating units delivering a	<b>(7)</b>
		power to the load with a transmission line having a loss of power.	
	<b>(b)</b>	Name the equation for determining the probability of failure / running of generating unit. Discuss its importance. Also state the importance of MTIL.	(7)
Q-5		Attempt all questions	(14)
	(a)	Describe the necessary steps for acquiring energy certification from the Gujarat state.	<b>(7</b> )
	<b>(b)</b>	With usual notations derive the mathematical model of turbine speed governing system.	(7)
Q-6		Attempt all questions	(14)
	(a)	List the issues related to design of islanding.	<b>(7)</b>
	<b>(b)</b>	Draw a neat sketch and explain turbine speed governing system.	<b>(7</b> )
Q-7		Attempt all questions	<b>(14)</b>
	(a)	Draw the schematic diagram of load frequency and excitation voltage regulation of a turbo generator. Discuss the nature of both the regulation system.	<b>(7</b> )
	<b>(b)</b>	Define the penalty factor and derive the exact co-ordination equation.	<b>(7)</b>
Q-8		Attempt all questions	(14)
	(a)	State the function of load dispatch centre.	<b>(7)</b>
	<b>(b)</b>	Describe briefly on inequality constraints on control variable for optimal load flow solution.	<b>(7</b> )

