Enroll	nent No:			
	C.U. SHAH	UNIVERSIT	Y	
	Winter Exa	mination-2022		
Subject	Name: Inter Connected Power Sys	stem		
Subject	t Code: 4TE07ICP1	Branch: B.Tech (Electrical)		
Semest Instruct		Time: 11:00 to 02:00	Marks: 70	
(3)	Instructions written on main answer b Draw neat diagrams and figures (if ne Assume suitable data if needed.		l. 	
)-1	Attempt the following questions:			(1
a)	Disadvantage of interconnected pov (a) Expensive tie line (b) Economical operation (c) Increase the reliability of power (d) All of the above	•		
b)	• •	(b) Area load dispatch ce		
c)				
d)		* *		
e)	(d) None of the above	ed by the governor mechanis	m.	

- (a) True
- (b) False
- **f**) In combined operation of several power plants the reserve capacity requirement is reduced.
 - (a) False
 - (b) True
- g) Voltage regulation is important for the design of
 - (a) Generator
 - (b) Motor
 - (c) Feeder
 - (d) Transmission Line
- **h)** What is the full form of AVR? This term is related to voltage control?



		(a) Automatic Voltage Recorder(b) Actuated Voltage Rectifier(c) Automatic Voltage Rectangular(d) Automatic Voltage Regulator	
	i)	Advantage of Interconnected Power System is (a) Use of old plants (b) Increase diversity factor (c) Reduced capital and operating cost (d) All of above	
	j)	In short transmission line the receiving end voltage may be greater than sending end voltage due to Ferranti effect. (a) True (b) False	
	k)	Which is policy making agency in India at central level (a) Central Electricity Regulatory commission (CERC) (b) Central Electricity Authority (CEA) (c) Power Exchange (d) State Government	
	1)	What is the full form of SCADA? (a) Supervisory Control and Document Acquisition (b) Supervisory Control and Data Acquisition (c) Supervisory Column and Data Assessment (d) Supervisory Column and Data Assessment	
	m)		
	n)	Nodes can be incident to Branches (a) One (b) Two (c) One or more (d) Infinite	
Attempt	any f	our questions from Q-2 to Q-8	
Q-2	a) b)	Attempt all questions Derive the formula for the transmission loss. Write short note on swing equation.	(14) (7) (7)
Q-3	a) b)	Attempt all questions State the function of load dispatch center. Discuss about cascade tripping.	
Q-4	a) b)	Attempt all questions Explain the phenomena of black out in brief. Define and explain optimal unit commitment and dynamic programming method.	(14) (7) (7)
Q-5	a)	Attempt all questions Explain methods of voltage control.	(14) (7)



	b)	Briefly explain the cost curve of the typical generator.	(7)
Q-6		Attempt all questions	(14)
	a)	List the issues related to design of islanding.	(7)
	b)	Draw a neat sketch and explain turbine speed governing system.	(7)
Q-7		Attempt all questions	(14)
	a)	Define the penalty factor and derive exact co-ordination equation.	(7)
	b)	Draw the schematic diagram of load frequency and excitation voltage regulation of a turbo generator. Discuss the nature of both the regulation system	(7)
Q-8		Attempt all questions	(14)
	a)	Explain PI control with neat and clean diagram.	(7)
	b)	Discuss optimal load flow solution without inequality constrains.	(7)

