BE | EE | sem-VII | PSOC | 27/11/2014

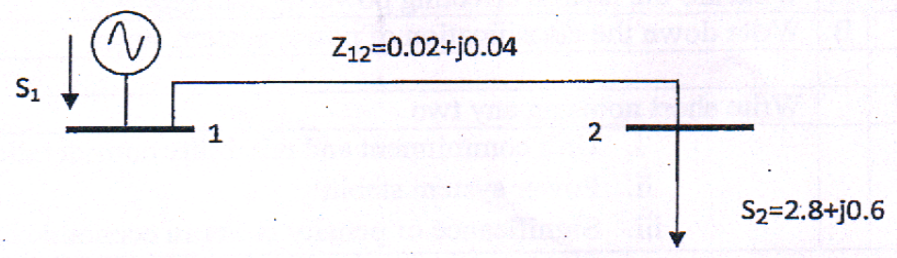
63 63

35+11+17

QP Code : 15348

(3 Hours) **[Total Marks : 100**

1	Question No. 1 is compulsory
2	Answer any four questions from the remaining six
3	Assume additional data wherever required
4	Figures to the right indicate marks

Q1		Answer all	**20**
	A.	Prove that for transient stability the accelerating power should be equal to decelerating power	
	B.	Compare decoupled and fast decoupled load flow equations	
	C.	Write down the condition for economic load dispatch by neglecting transmission losses.	
	D.	What is the relation between power generation, demand and loss in a power system for stable operation? If there is an increase or decrease in power demand, what will be the corresponding change in frequency? What should load frequency controller do to bring back the normal frequency in terms of opening and closing of turbine valve?	
Q2			
	A.	In the two-bus system shown below bus 1 is a slack bus with $V_1 = 1.0\angle 0°$ pu. and bus two is load bus with $S_2 = 2.8 + j0.6$ pu .The line impedance is Z=0.02+j0.04 pu a) Using Gauss-Seidel method, determine V_2 . Perform one iteration b) Determine S_1 and reactive and real power loss in the line  	**10**
	B.	Explain the swing equation which describes the rotor dynamics for a synchronous machine	**10**