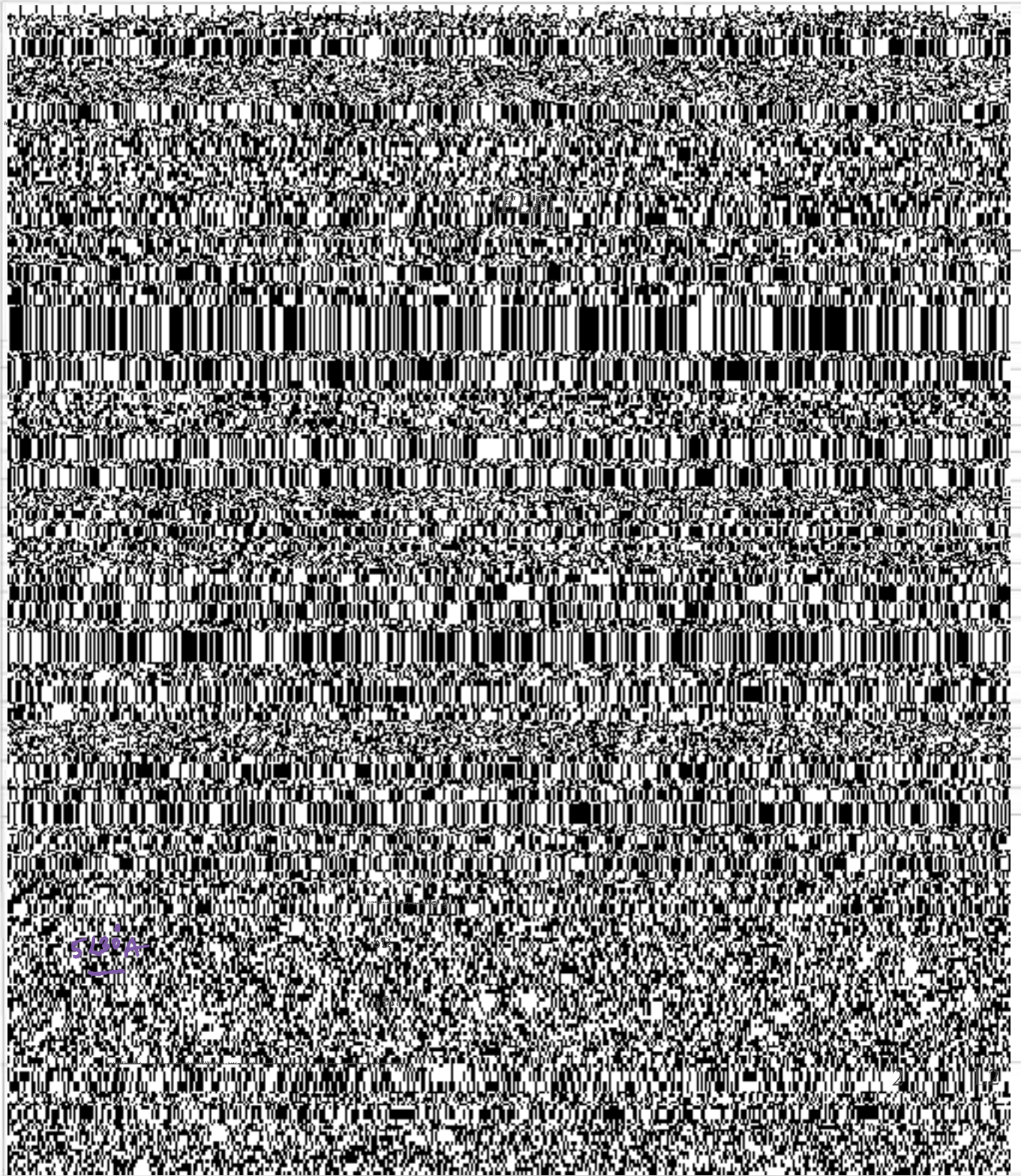




	OR			
14	a) When does transients occur in a circuit? Explain. b) Derive the Transient state response for Current in first order RL series circuit with DC excitation.	2M 8M	2	L2
15	Derive the expression for self and mutual inductance and also determine the coefficient of coupling?	10M	3	L2
	OR			
16	a) Find the inverse Laplace transform of $F(S) = \frac{3}{s} - \frac{5}{s+1} + \frac{6}{s+4}$ b) Consider the following circuit and determine the currents $i_1(t)$ and $i_2(t)$ for $t \geq 0$.	2M 8M	3	L2
17	Find $v_o(t)$ in the circuit using Laplace transform.	10M	4	L2
	OR			
18	a) Find the initial and final value of the function whose Laplace transform is $H(S) = \frac{20}{(S+3)(S^2+8S+25)}$ b) Derive the expression for current using Laplace transform in series RL circuit with DC excitation.	2M 8M	4	L2
19	Derive the condition of Reciprocity and symmetry for a two port Z - parameter.	10M	5	L2
	OR			
20	A typical two port network is characterized by equations $2V_1 + 4I_2 = I_1$ and $V_2 + 6V_1 = 8I_2$ Determine i) Y_{11} ii) Z_{21} iii) h_{21}	10M	5	L2