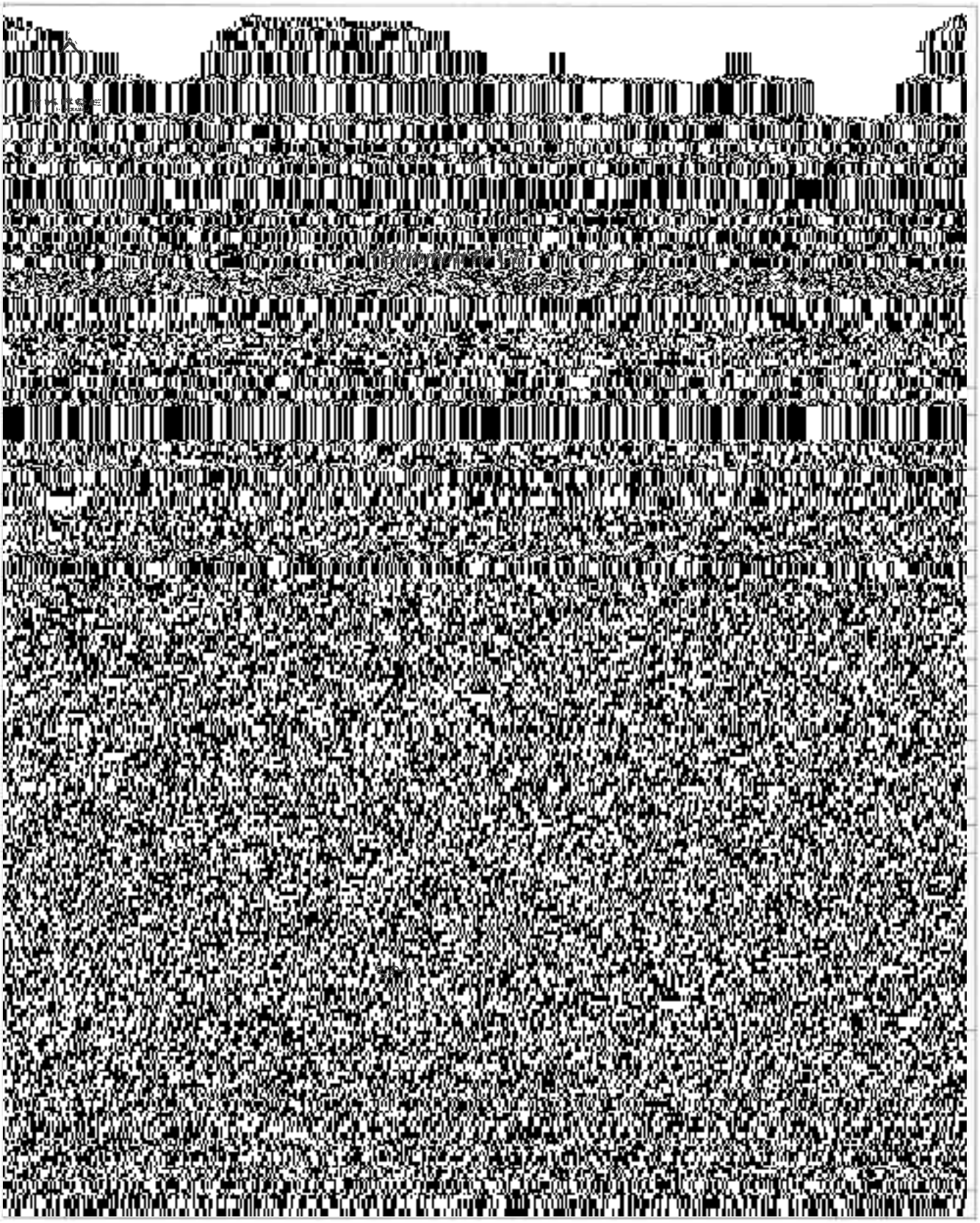

14	Derive the expression for impedance (Z), phase angle (Θ) and power factor (cosϕ) for RLC series circuit with relevant phasors. [10M]	2	L2
15	Explain the construction and working principle of single phase transformer. [10M]	3	L2
	OR		
16	a) Explain different types of losses in transformer. [5M] b) Explain about voltage regulation and efficiency of transformer. [5M]	3	L2
17	a) Derive the Emf equation of Dc Generator. [5M] b) Calculate the emf generated by a 6 pole dc generator having 480 conductors and driven at a speed of 1200 rpm. The flux per pole is 0.012 wb. Assume the generator to be i) lap wound ii) wave wound. [5M]	4	L2
	OR		
18	Explain the torque –speed characteristics of 3-phase induction motor. [10M]	4	L2
19	Explain about SFU,MCB and MCCB. [10M]	5	L2
	OR		
20	Classify the types of batteries and mention the important characteristics of batteries. [10M]	5	L2