1. [30%] (a) Draw the logic diagram of SR latch with NOR gates, and (b) derive its function table.
2. [30%] Derive the (a) characteristic table, and (b) characteristic function of D flip-flop.
3. [20/10/10%] Analyze the circuit. Derive (a) the output equation \( y \) and state equations \( A(t+1) \) and \( B(t+1) \), (b) the state table, and (c) the state diagram.