



- Q - 3 Explain Associative law, distributive law and commutative law. [08]  
OR
- Q - 3 Explain De'morgan first and second theorem. [08]
- Q - 4 Explain sum of product (SOP) and product of sum (POS). [08]  
OR
- Q - 4 Define encoder. Explain 8x3 encoder in detail. [08]
- Q - 5 Explain full adder in detail. [08]  
OR
- Q - 5 What is multiplexer? Explain 8x1 multiplexer in detail. [08]
- Q - 6 Explain shift left and shift right register. [08]  
OR
- Q - 6 Explain ring counters in detail. [08]



----- All The Best -----