

UNIT IV

S.No	Short Answer Question	Blooms taxonomy	Level
1.	Differentiate combinational and sequential logic circuits?	Apply	4
2.	Explain basic difference between a shift register and counter?	Understand	4
3.	Illustrate applications of shift registers?	Apply	4
4.	Define bidirectional shift register?	Knowledge	4
5.	Classify the basic types of counters?	Understand	4
6.	Differentiate the advantages and disadvantages of ripple counters?	Apply	4
7.	Design and explain gated latch logic diagram?	Understand	4
8.	Define race around condition? How it can be avoided?	Knowledge	4
9.	Explain what is a synchronous latch?	Understand	4
10.	Construct a latch using universal gates?	Apply	4
11.	Explain what do you mean a stable state?	Understand	4
12.	Define a Flip-Flop?	Knowledge	4
Long Answer Questions			
1.	Write short notes on shift register? Mention its application along with the Serial Transfer in 4-bit shift Registers?	Understand	4
2.	Design a Modulo-12 up Synchronous counter Using T-Flip Flops and draw the Circuit diagram?	Understand	4
3.	Design a 3-bit ring counter? Discuss how ring counters differ from twisted ring counter?	Understand	4
4.	Design a left shift and right shift for the following data 10110101?	Understand	4
5.	Design Johnson counter and state its advantages and disadvantages?	Understand	4
6.	List the characteristic equations for all Flip-Flops? Construct the transition table for the following flip-flops i) SR FF ii) D FF	Understand	4