ISL 37 - Digital Systems and Logic Design Lab Viva Questions

Experiment 1.	• Explain the difference between binary and BCD • Use NOR gates to formulate XNOR Gate • State the difference between SOP and POS
Experiment 2.	• What are universal gates? • State De-Morgan's theorem for three variables • 1+A=? ('A' can be a binary variable)
Experiment 3.	• Need of parity generator and checker • Assume you have 2-input OR gates but needed to implement a 4-input OR function. Show how to connect the gates to implement the 4-input requirement. • Difference between odd parity and even parity
Experiment 4.	• What is the difference between mux and dmux • Implement an 16:1 mux using 4:1 mux • For a 16:1 multiplexer how many selection lines are there?
Experiment 5.	• What is the difference between combinational and sequential circuit • What advantage does a J-K Flip-flop have over an S-R? • Derive the state diagram of JK, SR, T and D flip flop
Experiment 6.	• What is the difference between race around and toggling in flip-flop • Differentiate between edge triggering and level triggering • Derive the truth table of master and slave filp flop
Experiment 7.	• Draw the waveforms for each shift register for the input 1100
Experiment 8.	• Design a ring counter using JK flip flop • Design a Johnson counter using JK flip flop
Experiment 9.	• Difference between synchronous and asynchronous counter • What is lock in condition • What is set and reset
Experiment 10.	• Realize asynchronous counter using T flip-flop • What is ripple counter • What is a decade counter?