**Computer System Architecture**

1. Explain the fixed point and floating point representation in number system.
2. What are error detecting codes?
3. Explain the simple architecture of digital computer.
4. Draw logic diagram of 2x1 multiplexer. Using the block diagram of 2x1 multiplexer, give the design of 4x1 multiplexer.
5. Draw the logic diagram of J-K Flip flop and give its truth table and characteristic table.
6. Differentiate between half adder and full adder?
7. Explain the associative memory with a block diagram
8. What is instruction format? Discuss the various instruction formats?
9. What are the criteria on which memory hierarchy is formed? What information it conveys? Differentiate between main memory and cache memory.
10. Explain with a logic diagram, the working of a full-adder.
11. Explain the action of multiplexer and demultiplexer with suitable diagrams.
12. Explain in detail about serial in serial out shift register
13. Design a 4-bit binary adder/subtractor circuit.
14. Explain in detail the different types of instructions that are supported in a typical processor
15. What are the various types of computer registers?
16. What are the different types of flip flops? Explain with the help of logic diagrams and truth tables.
17. Solve the expression Z(A, B, C, D) : > (0,1,4,6,7,8,9,72,14,15) using K-map.
18. Solve the expression Z(A,B,C,D) : t(0,1 ,3,5,8,9,10,13,14,15) using k-map.
19. Explain the various types of Interrupts
20. Explain the JK master slave flip-flop
21. What are the logic gates in computer system?
22. Explain memory organization in computer architecture?