**Assignment 4**

Q.1 What do you mean by computer architecture?

Q.2 Differentiate between application software and system software.

Q.3 If a computer is executing 50 instructions, and one instruction is taking 3 clock cycles, and one clock cycle takes 20 seconds. What is the total CPU time is taken by the computer?

Q.4 Explain Amdahl’s Law with example.

Q.5 A processor spends 30% of its time on flp addition, 25% on flp mult, and 10% on flp division. Evaluate the following enhancements, each costing the same to implement:

1. Redesign of the flp adder to make it twice as fast.
2. Redesign of the flp multiplier to make it three times as fast.
3. Redesign the flp divider to make it 10 times as fast.