**Assignment 3**

**Q1.** What are the key advantages of using Digital Signal Processors (DSPs) over general-purpose CPUs and ASIC in real-time signal processing applications, particularly in terms of architecture and performance optimizations?

Q2. Can you describe the primary hardware units within a DSP processor, such as multipliers and accumulators, and explain how these components enhance the efficiency of signal processing tasks?

Q3. How does Very Long Instruction Word (VLIW) architecture improve instruction-level parallelism in DSP systems?

Q4. What are the benefits of pipelining in digital signal processing.

Q5. In what ways are DSP processors utilized in fields like telecommunications and medical imaging, and how do advancements in DSP technology influence the performance and capabilities of these applications?

Q6. Explain the Architecture and Features of TMS320C6713.