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Top-Down Approach"; "2.4.5 Programmable Digital Systems Design Using Block Structured Design"; "2.5 IC-Technology; Implementation Technology"; "2.5.1 Programmable Logic Device (PLD)"; "2.6 Processor Technology"; "2.6.1 Use of General-Purpose Processor (GPP)"; "2.6.2 Single-Purpose Processor"; "2.6.3 Application Specific Processor (e.g. Use of Microcontroller and DSP)"; "2.6.4 Summary of IC Technology and Processor Technology"
"2.7 Summary of the Chapter" "2.8 Review Questions"; "3 Introduction to Microprocessors and Microcontrollers"; "3.1 Introduction"; "3.1.1 Processor Architecture and Microarchitecture"; "3.2 The Microprocessor"; "3.2.1 General-Purpose Registers"; "3.2.2 Arithmetic and Logic Unit (ALU)"; "3.2.3 Control Unit"; "3.2.4 I/O Control Section (Bus Interface Unit)"; "3.2.5 Internal Buses"; "3.2.6 System Clocks"; "3.2.7 Basic Microprocessor Organization"; "3.3 Microcontrollers"; "3.3.1 Microcontroller Internal Structure"
"3.4 Microprocessor-Based and Microcontroller-Based Systems" "3.4.1 Microprocessor-based and Microcontroller-based Digital Systems Design Using Top-Down Technique"; "3.5 Practical Microcontrollers"; "3.5.1 AVR ATmega8515 Microcontroller"; "3.5.2 Intel 8051 Microcontroller"; "3.6 Summary of the Chapter"; "3.7 Review Questions"; "4 Instructions And Instruction Set"; "4.1 Introduction"; "4.2 Instruction Format"; "4.2.1 Expressing Numbers"; "4.2.2 Basic Instruction Cycle; Execution Path of an Instruction"; "4.2.3 Clock Cycle and Instruction Cycle"; "4.2.4 Labels"
"4.3 Describing the Instruction Cycle: Use of Register Transfer Language (RTL)"
