

15. ADVANCED COMPUTER ARCHITECTURE**UNIT: 38****Author: Prof. Anshul Kumar**

S.No.	Title	CD No.
1.	Introduction	835
2.	History of Computers	
3.	Instruction Set Architecture - I	
4.	Instruction Set Architecture - II	
5.	Instruction Set Architecture -III	
6.	Recursive Programs	840
7.	Architecture Space	
8.	Architecture Examples	
9.	Performance	
10.	Performance (Contd.)	
11.	Binary Arithmetic, ALU Design	
12.	ALU Design, Overflow	
13.	Multiplier Design	
14.	Divider Design	
15.	Fast Addition, Multiplication	
16.	Floating Point Arithmetic	850
17.	Processor Design -- Introduction	
18.	Processor Design	
19.	Processor Design - Simple Design (Contd.)	
20.	Processor Design - Multi-cycle Approach	
21.	Processor Design - control for Multi-cycle Design	855
22.	Processor Design – Microprogrammed control	
23.	Processor Design - Exception Handling	
24.	Pipeline Processor Design	
25.	Pipelined Processor Design - Data path and control	
26.	Pipelined Processor Design - Handling Data Hazards	860
27.	Pipelined Processor Design - Handling control Hazards	
28.	Memory Hierarchy: Basic Idea	
29.	Memory Hierarchy: Cache Organization	
30.	Memory Hierarchy: cache organization (contd.)	
31.	Memory Hierarchy: Virtual Memory	865
32.	Memory Hierarchy: Virtual Memory (Contd.)	
33.	Input / Output Subsystem: Introduction	
34.	Input / output subsystem: Interfaces and Buses	
35.	Input / output subsystem: Interfaces and Buses (contd.)	
36.	Input / Output Subsystem: I/O Operations	870
37.	Input / output subsystem: Designing /c system	
38.	Concluding Remarks	