Department of Computer Science & Engineering
Microprocessor & Computer Architecture
UNIT 1 Notes

Class #	Topics to be Covered	Chapter Title / Reference Literature
	Introduction and Motivation. How Program Execute? Relation between Processor, Operating System, Compiler and Memory.	(Refer Class PPTs Slide 1)
1.	1.1 Interrupts, Context Switching an overview. 1.2 Classification CISC Vs RISC and Introduction to ARM Processor	Text Book T2 Section 1.6
2.	ARM Processor: Register set, Introduction to ARM ISA and Instruction Layout	Text Book T2 Section 5.1
3.	Data Processing Instructions: Addition and Subtraction with programming Examples	Text Book T3 Chapter 3 Section 3.1 Pages 50-57
4.	Data Processing Instruction variants.	Text Book T3 Chapter 3 Section 3.1.3, Section 3.1.5, Section 3.1.6
5.	Data Transfer Instructions: Load and Store with programming examples	Text Book T3 Chapter 3 Section 3.3,3.3.2
6.	Data Transfer instruction and STACK operations	Text Book T3 Chapter 3 Section 3.3.3
7.	Branch Instructions	Text Book T3 Chapter 3 Section 3.2 Pages 58-59
8.	Multiplication Instructions and Instruction Encoding	Text Book T3 Section 3.1.7
9.	Interrupts and Programming Examples	Text Book T2 Section 5.6
10.	Instruction Encoding 1: Data Processing Instruction	Text Book T3 Appendix B.1,
11.	Instruction Encoding 2: Data Transfer Instruction	Text Book T2 all instructions Chapter 5.1 to 5.13
12.	Instruction Encoding 3: Branch and other Instructions	Text Book T2 all instructions Chapter 5.1 to 5.13

Literature:

Book Type	Code	Title & Author	Publication Info		
			Edition	Publisher	Year
Text Book	T1	Hennessy Patterson	Fifth Edition	MK Morgan Kaufmann	2012
Text Book	T2	ARM System on Chip, Steve Furber	Second Edition,	Pearson Education	2000
Text Book	T3	ARM System Developer's Guide	Reprint 2009	Elsevier	2009