Unit-1

von neumann machine: chapter 2 page 18-25 William Stallings e-book
instruction formats: chapter 10 pages 353-356 W.Stallings
fetch/execute cycle: chapter 3 page69-73 W.Stallings
instruction decoding and execution: chapter 3 page 69-73 W.Stallings
registers, register files: pages 487-491 W.Stallings
instruction types:pages 353-356 W.Stallings
addressing modes: chapter 11 pages: 401-408
subroutine call and return mechanism: ppt, page 568 W.Stallings
programming in ASM: notes on intranet
i/o techniques : pages 224-232 W.Stallings (only main points -details in unit 4)
interrupts: extension of subroutine
other design issues: chapter 21 pages:8-10 Hennessy and Patterson

Unit-2

Data Representation:world wide web for integers, real numbers, characters
H/W and S/W implementation of

a. integer adder/subtractor: morris mano chapter 10-2
b. integer multiplication :morris mano chapter 10-3
c. integer division: morris mano chapter 10-4

H/W and S/W implementation of

a. floating point addition/subtraction morris mano chapter 10-5
b. floating point multiplication/division morris mano chapter 10-5

Conversion between integer and real numbers: numerical methods text book

Unit-3

Memory system hierarchy: W.Stallings pages 114-117
Coding: parity(odd, even), Hamming code
Compression: internet
Data integrity: to be done
Electronic, magnetic, optical technologies: W.stallings pages 165-194, 203-212
Main memory organization, types of main memories, and its characterstics and performance: W.stallings pages 159-166
Latency, cycle time, bandwidth, interleaving: W.Stallings pages 168, 113-114
Cache memories: W.Stallings chapter 4
Virtual memory systems: W.Stallings pages 277-287
Reliability of memory systems: to be done
Error detecting and error correcting systems: w.Stallings pages 169-173