Project & Presentation Topics

Requirement: Submission of project report and presentation on any one topic

1. Cache memory organization of core i5 and core i7,

2. Cache memory organization of Pentium 4 and Power PC.

3. The external interface: Thunderbolt

4. The external interface: Infiniband

5. Virtual Memory System

6. IEEE standard for floating point representation and Arithmetic

7. IEEE Standard for Binary Floating-Point Arithmetic

8. IBM IEEE Floating-Point Architecture

9. Hardware implementation of 8-bit adder/sub tractor (using carry look ahead adder)

10. Hardware implementation of 8-bit unsigned integer multiplication

11. Hardware implementation of signed integer multiplication using Booth Algorithm

12. Hardware implementation of 8-bit unsigned integer division

13. Addressing modes and Instruction format of Pentium processor

14. Addressing modes and Instruction format of PowerPC

15. Pipelining hazards

16. Intel 80486 pipelining

17. Intel Pentium pipelining

18. RISC pipelining

19. Instruction Level Parallelism

20. DDR, DDR3,DDR4 and DDR5 RAM architecture

21. PCIe bus architecture and Data transfer operation

22. The Intel 82C55A Programmable Peripheral Interface: Architecture and operations

23. The Intel 8237A DMA controller and Intel 8259A interrupt controller

24. AGP bus architecture

25. Reduced Instruction Set Architecture

26. ALU design of Simple microprocessor

27. Hardwared control unit

28. Microprogrammed Control unit