

*Syllabus* : Arithmetic and Logic Unit; Memory Organization; Instruction sets; RISC and CISC paradigms; Various addressing modes; Assembly language programming; Instruction interpretation: micro-operations and their RTL specification; CPU design: Hardwired and Microprogrammed; I/O transfer techniques: Program controlled, Interrupt controlled and DMA; Introduction to computer buses, peripherals and current trends in architecture.

*Texts* :

1. William Stallings, Computer Organization and Architecture: Designing for Performance, 8/e, Pearson Education India. 2010.
2. D. A. Patterson and J. L. Hennessy, Computer Organization and Design, 4/e, Morgan Kaufmann, 2008.

*References* :

1. A. S. Tanenbaum, Structured Computer Organization, 5/e, Prentice Hall of India, 2009.
2. V. C. Hamacher, Z. G. Vranesic and S. G. Zaky, Computer Organization, 5/e, McGraw Hill, 2002.
3. J. L. Hennessy and D. A. Patterson, Computer Architecture: A Quantitative Approach, 4/e, Morgan Kaufmann, 2006.
4. D. V. Hall, Microprocessors and Interfacing, 2/e, McGraw Hall, 2006.