

1.2 CENTRAL PROCESSOR UNIT (CPU)

Any attempt to explain in detail the operation of CPU would take us too far. Who is anyway interested in that?! It is important to say that CPU is made in RISC technology because this fact can affect you to buy exactly this microcontroller.

RISC stands for *Reduced Instruction Set Computer*, which gives the PIC16F877 two great advantages:

- ✓ Its CPU can recognize and execute only 35 simple instructions. Just to mention that in order to program other microcontrollers it is necessary to know more than 200 instructions by heart.
- ✓ Execution time is the same for all of them and lasts 4 clock cycles (oscillator whose frequency is stabilized by quartz crystal). The only exceptions are jump and branch instructions whose execution time is twice as long. It means that if the microcontroller's operating speed is 20MHz, execution time of each instruction is 200nS, i.e. the program will be executed at the speed of 5 million instructions per second!

