

INTEGRATED CIRCUITS AND MICROPROCESSORS

Microprocessor development

Microprocessors are classified in terms of the number of 'bits' of information that can be transferred in parallel and held in their registers. This number has been steadily increasing with the growth of circuit technology. Thus, 8-bit, 16-bit, and 32-bit microprocessors are now common, and 64-bit chips have also been developed.

One of the first microprocessors suitable to serve as the basis of a personal computer was the Intel 8080. This influenced the design of the once popular Z80 and, less directly, the later line of 80x86 microprocessors (80286, 80386, 80486 and 80586 or Pentium) found in many personal computers. The 68000 microprocessor series from Motorola also found widespread use in the Macintosh range of computers. By the 1990s new microprocessors were being developed to exploit the success of Reduced Instruction Set Computing (RISC) architectures, which enhanced processor speed by reducing the variety and complexity of recognized commands. The Advanced Risc Machine (ARM), developed by the British firm Acorn, was the first RISC microprocessor to be used in a personal computer for home.

1. Answer the following questions.

1 What determines the classification of microprocessors?

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2 Nowadays what are the most common microprocessors?

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3 Which microprocessor laid the foundation of the personal computer?

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4 What was the advantage of RISC?

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5 Who developed the ARM and what was it used for?

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2. Choose the right answer.

1 **classify** means:

- 1 organize
- 2 decipher
- 3 disarrange

2 **transfer** means:

- 1 cancel
- 2 move
- 3 review

3 **influence** means:

- 1 affect
- 2 pass
- 3 achieve

4 **exploit** means:

- 1 destroy
- 2 pass
- 3 utilize

3. Match each word with its synonym.

- 1 growth
- 2 basis
- 3 range
- 4 speed
- 5 variety

- a diversity
- b series
- c velocity
- d increase
- e foundation