CÓDIGOS EM ELETRONICA DIGITAL
CÓDIGO BCD

- BCD – Binary Coded Decimal
- Dígitos de 0 a 9
- Cada decimal é representado individualmente por 4 bits;

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### Decimal $\rightarrow$ BCD

- **Tabela**

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**Comparação**

$319_{(d)} = 100111111_{(b)}$
BCD → Decimal

- Agrupar por 4 + Usar tabela

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Código Gray

- Peculiaridades
  - Apenas um dígito muda entre dois números sucessivos na seqüência
  - Evita erros
  - “Espelhado”

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Gray
Gray - Aplicação

Tocci, 2007
Código ASCII

• ASCII – American Standard Code for Information Interchange
• Código de 7 bits = 128 símbolos
• Troca de informação alfanumérica entre computador e dispositivos externos (ex. teclado)
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<th>Hex</th>
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http://www.cdrummond.qc.ca/cegep/informat/Professeurs/Alain/files/ascii.htm
Paridade

- Método para detecção de erros na transmissão de dados
Bit de Paridade

• Bit extra anexado a palavra para indicar paridade
• Paridade Par
  – O bit de paridade é tal que o número de “1”s na palavra torna-se par
• Paridade Impar
  – O bit de paridade é tal que o número de “1”s na palavra torna-se impar
Bit de Paridade

• Exemplo
  – Para a palavra 1000001 (A em ASCII) que tem 2 “1”s

• Paridade Par
  – Bit de Paridade 0
  – Palavra com bit de paridade 01000001

• Paridade Impar
  – Bit de Paridade 1
  – Palavra com bit de paridade 11000001