

Control and embedded Systems Tutorial

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Data lines, bits, nibbles, bytes, words, binary and HEX Test Answers

1. G), A) = Data Lines, Data Bus
2. A) True
3. C), H) Byte, Character (or char)
4. C) Binary
5. C), H) Least Significant Bit, Most Significant Bit (or msb)
6. B) Weight
7. B) HEX
8. C) Nibble
9. G), B) Word, Long Word
10. C), H) Signed, Unsigned
11. F) Bit

MS Binary Nibble	LS Binary Nibble	MS HEX Nibble	LS HEX Nibble	Decimal		MS Binary Nibble	LS Binary Nibble	MS HEX Nibble	LS HEX Nibble	Decimal
0000	0000	0	0	0		0000	0001	<u>0</u>	<u>1</u>	1
0000	0010	0	2	<u>2</u>		<u>0000</u>	<u>0011</u>	0	3	3
0000	0100	<u>0000</u>	<u>0100</u>	4		0000	0101	0	5	<u>5</u>
<u>0000</u>	<u>0110</u>	0	6	6		0000	0011 <u>0111</u>	<u>0</u>	<u>7</u>	7
0000	1000	0	8	<u>8</u>		<u>0000</u>	<u>1001</u>	0	9	9
0000	1010	<u>0</u>	<u>A</u>	10		0000	1011	0	B	<u>11</u>
0000	1100	0	H <u>C</u>	12		0000	1101	<u>0</u>	<u>D</u>	13
0000	0000 <u>1110</u>	0	E	<u>14</u>		0000	1111	<u>0</u>	<u>F</u>	15
1010	0000	A	0	<u>160</u>		<u>0110</u>	<u>0100</u>	6	4	100
<u>0001</u>	<u>1011</u>	<u>1</u>	<u>B</u>	27		<u>0101</u>	<u>1100</u>	5	C	<u>92</u>
0011	0111	<u>3</u>	<u>7</u>	55		0001	1101	1	d	<u>29</u>
0011	0011	3	3	33 <u>51</u>		<u>1100</u>	0000	<u>C</u>	0	192
<u>1010</u>	<u>1010</u>	a	a	<u>170</u>		<u>1011</u>	<u>1011</u>	B	B	<u>187</u>
<u>1100</u>	<u>1100</u>	c	c	<u>204</u>		<u>1101</u>	<u>1101</u>	D	D	<u>221</u>
<u>1110</u>	<u>1110</u>	E	E	<u>238</u>		<u>1111</u>	<u>1111</u>	f	f	<u>255</u>

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