**Chapter One: Number Systems and Code**

1. Atwo’s complement = ( 1100 1001 ), (-A) two’s complement = ( ? )

**Solution:**

A: 1 100 1001 🡪 1 011 0110 🡪 1 011 0111 (sign magnitude)

-A: 0 011 0111 (sign magnitude, two’s complement)

2. For a signed 2’s complement number 1.01101, the sign-magnitude number is（?）

**Solution:**

1.01101 🡪 1.10010 🡪 1.10011 (sign magnitude)

3. (35.125)10 = ( ? )2

**Solution:**

35/2🡪 110001 (remainder) 🡪 100011

0.125\*2 🡪 001 (resulted integer) 🡪 0.001

100011.001 (binary number)

4. (65)16 is equivalent to:

A. ( ? )10 B. ( ? )8421BCD C. ( ? )2

**Solution:**

65 🡪 0110 0101 (binary) 🡪 6\*16+5=101 (decimal) 🡪 0001 0000 0001 (8421BCD)

5. ( 7D6 )16 =( ? )8421BCD

**Solution:**

7D6 🡪 0111 1101 0110 (binary) 🡪 7\*16^2+13\*16+6=2006 (decimal)

🡪 0010 0000 0000 0110 (8421BCD)

6. For the information 11101010，the generated one bit EVEN parity code is ( ? ) .

**Solution:**

5 ones 🡪 even parity is 1