Quiz 5

* Required

1. **Email address** *

   ANSWER KEY

2. **What is the decimal representation of the signed-magnitude binary number 1100 0100?** *

   -68

3. **What is the result of adding 0x10F and 0x214 (both are hexadecimal numbers)?** *

   0x323

4. **What is the I (capital-i) bit usually for in data-processing instructions in ARM?** *

   Mark only one oval.

   - ◯ It shifts the destination register
   - ◯ It specifies if the condition flags should be set
   - ◯ It is part of deciding which arithmetic operation to use
   - ◯ It specifies whether the second argument will be an immediate value or a register

5. **The machine encoding of a branch instruction can express changing the program counter to any 32-bit address.** *

   Mark only one oval.

   - ◯ True
   - ◯ False

6. **Which of the following instructions set condition flags, but don't change the values in any registers?** *

   Mark only one oval.

   - ◯ subs r1, r2
   - ◯ cmp r1, r2
   - ◯ sub r1, r3
   - ◯ bne loop

7. **Which of the following condition mnemonics means "The overflow bit AND the zero bit are set"?** *

Mark only one oval.

- ◯ NE
- ◯ PL
- ◯ GE
- ◯ HS
- ◯ None of the above

8. **The difference in the machine instructions for "sub r1, r2, r3" and "subne r3, r2, r3" is in... (choose ALL that apply)** *

Check all that apply.

- ☐ Bits 19:16 (the Rn part)
- ☐ Bit 20 (the S part)
- ☑ Bits 15:12 (the Rd part)
- ☐ Bits 24:21 (the cmd part)
- ☑ Bits 31:28 (the cond part)

9. **If logically shifted left by THREE bits using the "lsls" instruction, which of the following examples would set the carry bit? Choose ALL that apply** *

Check all that apply.

- ☑ 0x20000001
- ☐ 0x00000008
- ☐ 0x10000000
- ☑ 0x20000002
- ☑ 0x80000000

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