

Solutions 3

Question 1:

a) Holds flags which provide information about the result of the last computation.

N=1, Z=1, C=0, V=0

b) Yes

c) No

d) No

e)

CMP R1, #0

BEQ foo

f)

CMP R1, R2

BEQ bar

g)

LDR R1, =0x1A2B3C4D

CMP R0, R1

BEQ baz

Question 2:

a) 0x4800 0000

b) When pins are left floating, they pick up noise and toggle randomly between logic levels. The push buttons pull the pins down to logic 0 when pressed, hence the default state when not pressed should be a logic one, requiring pull-up resistors.

Question 3:

a)

MOVSR1, #0x0F or LDR R1, =0x0F or MOVSR1, #0b1111
ORRS R0, R0, R1

b)

```
LDR R1, =0x1800    or    LDR R1, =0b1100000000000000
ANDS R0, R0, R1
```

c)

```
LDR R0, =0x800000 or LDR R0, =0b100000000000000000000000
ANDS R0, R0, R2
BNE foobar
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