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Questions:

1.

Timeout Period =  $(1/\text{clock frequency}) * (1 \text{ or } 16) * (PS + 1) * (REF + 1)$

Timeout Period =  $(1/80\text{MHz}) * (1) * (80 + 1) * (1699 + 1) = 1.721\text{ms}$

The delay would be 1.721ms instead of 1.7ms, which is in error of 1.22%.

2.

a. MCU\_RSTIN\_b

b. Active Low, so that a logic 1 corresponds to an electrical low signal, and vice versa.

c. This signal is connected to pin 141, which is called !RSTIN\_B.

d. Primary reset input to the device. Asserting RSTI immediately resets the CPU and peripherals.

3.

a. PB1\_SW

b. It is connected to pin 93, which is called IC0/OC0/PWM1.

c. The primary function is GPT0, the tertiary function is PWM1, and the quaternary function is PTA0.

d. The port is TA.

e. SW1 is connected to pin 0 of port TA.

f. We first have to program the port TA Pin Assignment Register (PTAPAR)

g. `MCF_GPIO_PTAPAR &= ~3;`

h. This GPIO register is called the Port Data Direction Register (DDRTA)

i. `MCF_GPIO_DDRTA &= ~1;`

j. The GPIO register we would need to access is called the Port Pin Set Data Register (SETTA).

`int sw1 = MCF_GPIO_SETTA & 1;`