1. A portion of an assembly language program written for an 8-bit microprocessor is given below along with explanations. The code is intended to introduce a software time delay. The processor is driven by a 5 MHz clock. The time delay (in μs) introduced by the program is

   MVI B, 64H; Move immediate the given byte into register B. Takes 7 clock periods.

   LOOP: DCR B ; Decrement register B. Affects Flags. Takes 4 clock periods.

   JNZ LOOP ; Jump to address with Label LOOP if zero flag is not set. Takes 10 clock periods when jump is performed and 7 clock periods when jump is not performed.