Revision Sheets #03: ADC and DAC converters

1. What is **not** part of the main components in a typical A/D board?
   a. Sensors
   b. Input multiplexer and Input signal amplifier
   c. Sample and hold circuit
   d. A/D converter (ADC)
2. What is part of the main components of a typical A/D board?
   a. Input signal amplifier b) Sample and hold circuit
   c. FIFO buffer and Timing system d) Sensors e) a, b, and c
3. The use of …… eliminates the need for a signal amplifier and an A/D converter for each input channel.
   a) variable gain amplifier b) Sample and Hold
   c) Multiplexer d) Switch
4. The use of multiplexers in A/D data acquisition boards:
   a. Higher the cost of the board.
   b. Limit the number of inputs.
   c. Decrease the overall performance.
   d. Increase the overall performance
5. What is not a plug-in data acquisition board?
   a) Analog input (A/D) b) Expansion I/O
   c) Digital I/O d) Counter/timer I/O
6. The main factor (s) in selecting an ADC (is/are)
   a) Conversion time b) Both A and C
   c) Resolution d) none of
7. Which of the following does not influence the ADC step size?
   a) Vref b) Resolution
   c) DOUT d) All of the above
8. Given a step size of 11.5 mV for a 9-bit ADC, then Vref equals
   a) 5.888 V b) 2.560 V
   c) 2.944 d) 2.246
9. Consider an 8-bit ADC with Vref=5. The step size is
   a) 19.53 mV b) 12.80 mV
   c) 6.25 mV d) 5.12 mV
10. Consider an 8-bit ADC with Vref=5 and input volatge of 1.7 V. The DOUT in decimal is
    a) 87 b) 132
    c) 272 d) 332

Ans: 1.A, 2.E, 3.C, 4.C,5.B, 6.B,7.C,8.A ,9.A,10.A