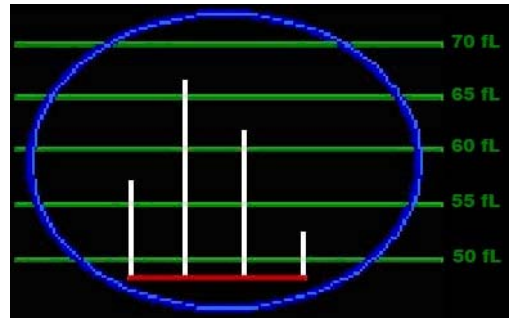
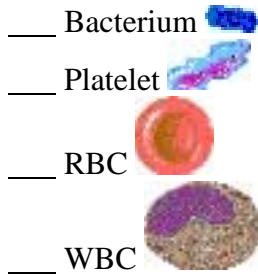


Coulter Innovations – Analytical Technologies

1. Match the particles to the approximate pulse on the oscilloscope.



A B C D

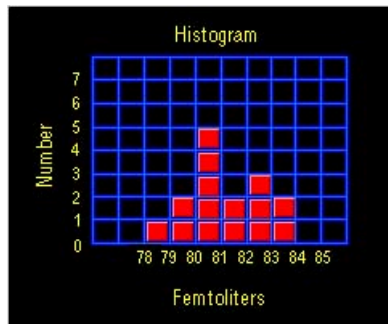
2. If the oscilloscope pattern below were produced on an instrument with a lower threshold of 60fL, how many particles would be counted? _____
3. Match to definitions: Sweep Flow, Aperture, Channel, Coincidence, Electrodes
- ___ This technology prevents particles from re-circulating into the sensing area.
- ___ Its size is appropriate to the size of the particles to be counted to measure impedance correctly.
- ___ An area set-up between two thresholds
- ___ It is corrected automatically for accurate counting and sizing
- ___ Electrical current must flow between them to measure the resistance given by non-conductive particles.

Coulter Innovations – Histogram Overview

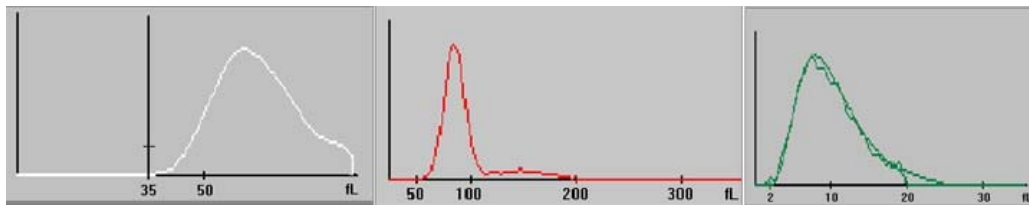
1. Why are histograms important? (circle one)
 - a. Histograms offer a visual representation of what was counted at the aperture.
 - b. Histograms verify that a count has a typical pattern
 - c. Histograms alert you to possible interfering particles
 - d. **All of the above**

2. Which of the following is the mode channel? (circle one)

- a. 78-79
- b. 80-81
- c. 81-82
- d. 82-83



3. Match the following histograms with their corresponding names
 - ___ Typical RBC Histogram
 - ___ Typical Platelet Histogram
 - ___ Typical WDC Threshold Monitor

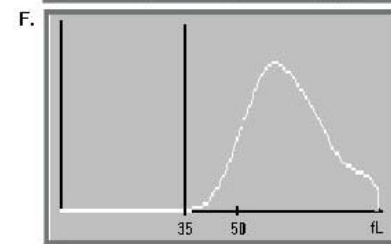
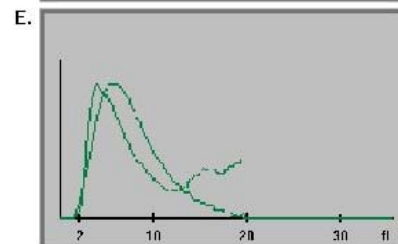
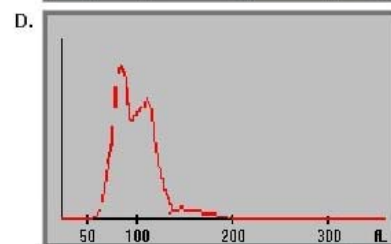
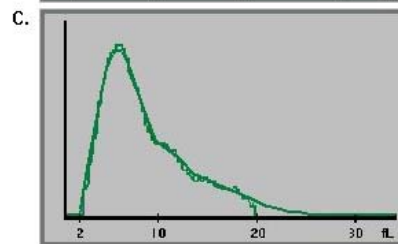
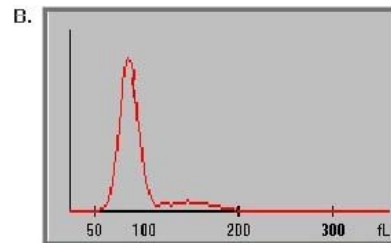
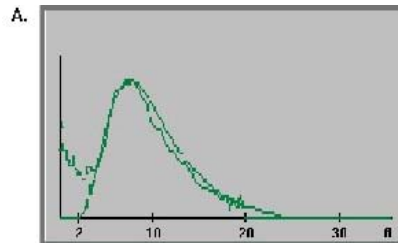


a.

b.

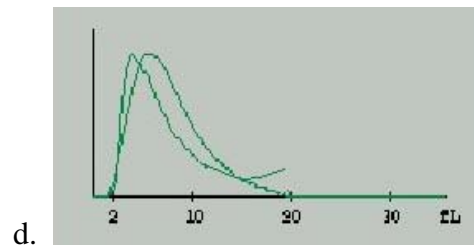
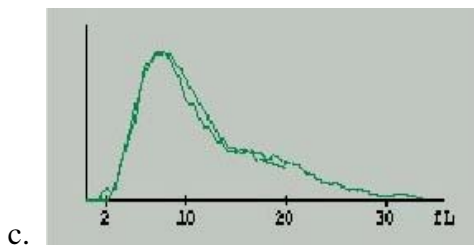
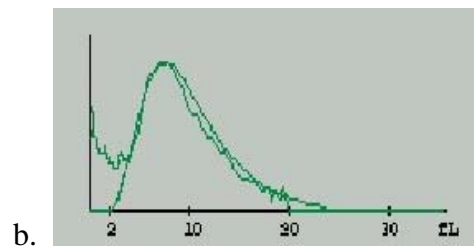
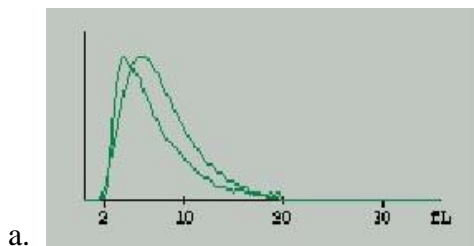
c.

4. Select the histogram(s) that you think are atypical. (circle all that apply)



Coulter Innovations – Parameter Deviations

1. The WBC and RBC counts are measured using. (circle one)
 - a. Coulter AccuGate Analysis
 - b. The Coulter Principle
 - c. Coulter VCS Technology
 - d. None of the above.
2. Coulter Systems generate fitted curves for both positive and non-positive raw data curves. (circle one)
 - a. T
 - b. F
3. Select the histogram(s) that show the fitting process can provide accurate results even the raw data curve is atypical. (circle all that apply)



Coulter Innovations – Basic Flow Cytometry

1. Which statement about the flow cell is true? (circle one)
 - a. There are two sets of electrodes; one set for direct current and the other set for high frequency current
 - b. It allows a prepared blood sample to be analyzed as a single stream of cells
 - c. It has a single aperture
 - d. The sample stream flows from top to bottom
 - e. B and C

2. What has the highest pressure, the sample stream or the sheath flow? (circle one)
 - a. Sample stream
 - b. Sheath flow

3. What is the function of the flow cell? (circle one)
 - a. It isolates the sample and controls its flow
 - b. It counts the cells going through it
 - c. It provides a container where measurements can be taken on cells flowing one at a time through an aperture
 - d. Both A and C

4. What will happen if the sample pressure drops below the sheath pressure? (circle one)
 - a. The cells won't flow through the aperture in a single file
 - b. The sample and sheath fluids will mix together
 - c. The flow cell will clog
 - d. None of the above

Coulter Innovations – VCS Flow Cytometry

1. AccuGate Software (circle one)
 - a. Uses adoptive contouring
 - b. Finds the optimal separation between overlapping clusters of data
 - c. Is a statistical tool
 - d. Does not do well with highly irregular population separations
 - e. Uses non-linear separation techniques

2. When the AccuGate Software determines that a separation is highly irregular, it:
(circle one)
 - a. Gives no results
 - b. Makes a subsequent analysis of the identified regions and corrects the deficiencies in the separation
 - c. Uses linear gating instead of adaptive contouring in these cases
 - d. Both A and B