Expt #1:
This objective of this lab is to familiarize with the use of MATLAB for computing partial fraction expansion and zero-pole gain format, as well as to re-familiarize with the inverse Z-transform.

Expt #2:
In this lab, MATLAB will be used to test and display the frequency response of a given form. Using the PLOT function, the frequency response will be drawn on the screen and how the position of the poles and zeroes will affect it will also be determined.

Expt #3:
The objective of this lab is to explore and use the DFT and circular convolution.

Expt #4:
In this lab, the use of zero-padding and its impact of DFT length are explored. These were done because of their importance in proper use of the FFT.

Expt #5:
In this lab, the overlap-save method and inverse FFT functions are implemented.

Expt #6:
The objective of this lab is to observe and study the windowing effect on the DFT.

Expt #7:
The purpose of this lab is to demonstrate the difference between even-symmetric and odd-symmetric filters. It also introduces non-causal filtering using signal reversal to accomplish linear-phase filtering.

Expt #8:
This laboratory exercise demonstrates the difference between impulse-invariant and bilinear transformations.

Expt #9:
This lab explores the use of windows in FIR filter design. Low pass and high pass filters are designed with various windowing techniques.