

## Special Problem II.B-12

You are designing a super-heterodyne receiver to receive RF signals from 90 to 140 MHz. Your only other design requirement is 30 dB of image rejection.

Your preselector filter is a 3<sup>rd</sup> order Butterworth filter.

1. Determine a suitable IF for this design, as well as the required LO frequencies, if high-side tuning is used.
2. Determine a suitable IF for this design, as well as the required LO frequencies, if low-side tuning is used.
3. Which of these two solutions would you implement (high-side or low side), and why (give some justification!).