



Benha University
Faculty of Engineering
Shoubra

Electronic circuits (B)

Electrical Eng. Dept.
3rd year communication
2012-2013

Sheet (3) – supplementary

1. What determines the bandwidth of low pass filter?
2. How are the Q and Bandwidth of a band-pass filter related? Explain how selectivity is affected by the Q of a filter?
3. Explain how Butterworth, Chebyshev, and Bessel response filter differ?
4. What determine the response characteristic of a filter?
5. Name the basic parts of an active filter.
6. How many poles does a second-order low-pass filter have? How many resistors and how many capacitors are used in the frequency-selective circuit?
7. What is the primary purpose of cascading low-pass filters?
8. How does a high-pass sallen-key filter differ from the low-pass configuration?
9. To increase the critical frequency of a high-pass filter, would you increase or decrease the resistor values?
10. If three two-pole high-pass filters and one single-pole high-pass filter are cascaded, what is the resulting roll-off?
11. What determine the selectivity in a band-pass filter?
12. One filter has a $Q=5$ and another has a $Q=25$. Which has the narrower bandwidth?
13. List the active elements that make up a state-variable filter.
14. List the active elements that make up a biquad filter.
15. How does a band-stop response differ from a band-pass response?
16. How is a state-variable band-pass filter converted to a band-stop filter?

Good Luck

Dr. Rokaia Mounir