

Topic 10

Practice Exercises

The Chapter `ch10_freqrespfilt.pdf` as well as the Notes has some worked examples.

Some of the following exam questions can then be used as the exercises for this Topic. The recent 'IT' ones are usually simpler, so are good for getting started.

2016-10'IT'omtenta Q4

2016-06'IT'omtenta Q5

2016-03'IT'omtenta Q5

2015-10'IT'omtenta Q5

2015-05'IT'omtenta Q4 just a Bode amplitude plot; no circuit to solve

2015-03'IT'omtenta Q5

2015-10'IT'omtenta Q5

2014-10'IT'omtenta Q4

2014-08'IT'omtenta Q4

2014-01'IT'tenta Q4

2014-03'IT'omtenta Q4

2016-06'EM'omtenta Q7

2016-03'EM'tenta Q7

2015-06'EM'omtenta Q7

2015-03'EM'tenta Q7

2015-06'EM'omtenta Q7

2015-03'EM'tenta Q7

2014-05'EM'omtenta Q6

2014-03'EM'tenta Q6

2013-06'EM'omtenta Q5

2013-03'EM'tenta Q5

2013-06'E'omtenta Q1

2015-06'E'omtenta2 Q6 $H(\omega)$ here isn't reducible to first-order parts like $(1 + j\omega/\omega_x)$, so you would have to handle the ω^2 terms.

The ones from 'EM' (Energi och miljö) and IT have focused on circuits where the network function can be expressed as terms of just k , $kj\omega$ or $(1 + j\omega/\omega_x)$. They usually involve finding a network function, then plotting its Bode amplitude plot. Opamps and dependent sources are popular as ways to ensure that different C and L components are independent!