Course
MEC-E5001
Course materials
Your points
Lab Queue

**This course has already ended.**

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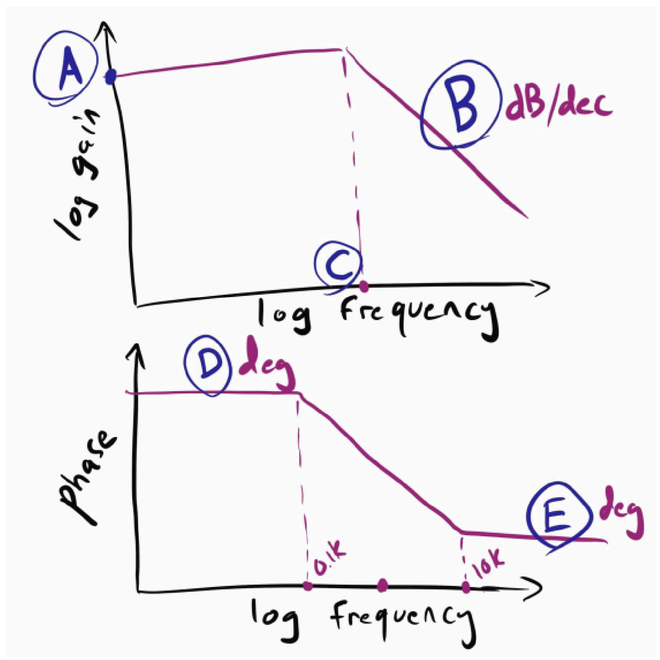
MEC-E5001 / 3. Electronics / 3.2 Lecture Quiz 3

# Lecture Quiz 3¶

Points 0 / 350 My submissions 0 / 2 Deadline Tuesday, 30 January 2024, 09:00 To be submitted alone Show model answer

The deadline for the assignment has passed (Tuesday, 6 February 2024, 09:00).

Draw manually Bode plot (gain and phase) of transfer function $X(s)/F(s)$, of the equation $m\ddot{x}(t) + c\dot{x}(t) + kx(t) = f(t)$. Select correct value matching to the letter in pre-drawn template.




**Question 1** 30 points
What describes A best?

- 1/k
- sqrt(k/m)
- 2k
- k/2
- 10k
- 5k

**Question 2** 30 points
What describes B best?

- -20
- -40
- -80

**Question 3** 30 points
What describes C best?

- 1/k
- sqrt(k/m)
- 2k
- k/2
- 10k
- 5k

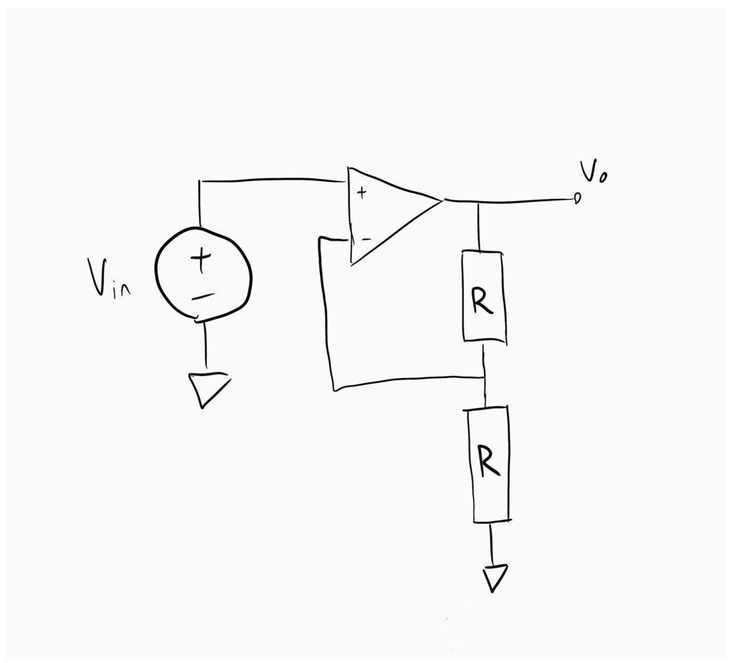
**Question 4** 30 points
What describes D best?

- 0
- 90
- -45
- -90

**Question 5** 30 points
What describes E best?

- -90
- -120
- -150
- -180

What is the amplification ($\frac{V_o}{V_{in}}$) of the system blow?




**Question 6** 100 points
Amplification is...

- 1/2
- 2
- 1
- 5
- 1/4

**Question 7** 100 points
Explain the circuit 74F148 used in the AD conversion example during the lecture. What it takes as input, what is output, what is the purpose of the circuit in the given example? (minimum of 3 sentences). **NOTE: This exercise will be manually assessed by teaching assistants. The points from this exercise are not final.**

Submit

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