Course
MEC-E5001
Course materials
Your points
Lab Queue

This course has already ended.

« 1. Introduction Course materials 1.2 MATLAB and Simulink tutorial »
MEC-E5001 / 1. Introduction / 1.1 Lecture Quiz 1

Lecture Quiz 1

Points 0 / 350 My submissions 0 / 2 Deadline Tuesday, 16 January 2024, 09:00 To be submitted alone Show model answer

The deadline for the assignment has passed (Tuesday, 23 January 2024, 09:00).

Question 1 110 points
Why the R&D processes are required, what they enable and what they limit? Check all statements that are true.

- ☐ They offer a systematic approach to tackle complex and broad projects.
- ☐ Project management is harder when using an R&D process framework.
- ☐ Utilizing an R&D process framework is required to make professional quality products.
- ☐ R&D process framework enables everyone of the team, regardless of their background, to see the same overview of a project and it's progress.
- ☐ Utilizing an R&D process framework may limit the freedom and creativity of the team.

What are the responsibilities of the following team members in an R&D process? Match member with the corresponding responsibility.

Question 2 30 points
I acquire knowledge of competions products and advantages of our products. My responsibilities also include discussing with R&D Engineer about upcoming changes in products.

Sales Engineer

Question 3 30 points
My responsibility is to make sure our products are safe and fulfill the required standards

Sales Engineer

Question 4 30 points
I design and innovate new ideas, which meet the customer needs that the Sales Engineer has identified.

Sales Engineer

Question 5 30 points
My responsibility is to make sure that the product can endure the required loads in required conditions. In addition I have to make sure that even user misuse doesn't cause the product to fail, to some extent.

Sales Engineer

Question 6 120 points
Solve differential equation $\ddot{x}(t) + 0.1\dot{x}(t) + x(t) = sin(10t)$ The initial conditions are all zeros. At what time does the x go to zero (go from positive to negative) the first time after the start? Give the answer with at least one decimal accuracy.

Submit

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