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**Courses » Acoustic and Noise Control**

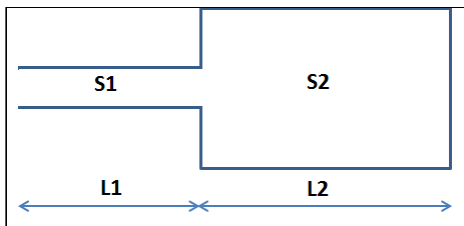
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**Due on 2017-10-05, 12:29 IST**

1. Using MATLAB, plot the transmission loss against non-dimensional frequency ( $kL$ ) for two simple expansion chamber muffler having the same expansion chamber length. Assume, the inlet duct and the tail pipe have identical cross-section.
- For muffler-1 the expansion ratio is 2.
  - For muffler-2 the expansion ratio is 4.

Comment on the transmission loss as the expansion ratio increases.

2. Consider Helmholtz resonator as shown in the fig.  $L_1 = 3$  cm,  $L_2 = 11.25$  cm the area of the neck and cavity of the resonator be  $9$  cm<sup>2</sup> and  $100$  cm<sup>2</sup>, respectively. Find the undamped natural frequency of the Helmholtz resonator.



3. Write a short note on moving coil microphone.

Note: You need to submit as a PDF file which contains MATLAB plot (No need to submit the script file ) and short note should not exceed half page.

**Your Submission:**

Due Date Exceeded.

As per our records you have not submitted this assignment.





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