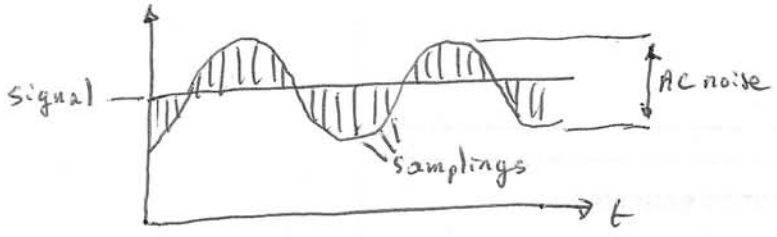
Hi !

As the answer needs some sketches and mathematical formula, I prefer to answer by hand writing. Sorry for that...

1) Aliasing: no, there is no risk of aliasing, because the cut off frequency of the analog filter is 10 Hz, so as long as the sample frequency is higher than 20 Hz, the Nyquist condition is met.

2) Sample frequency multiple of 60Hz:

a) Current situation.



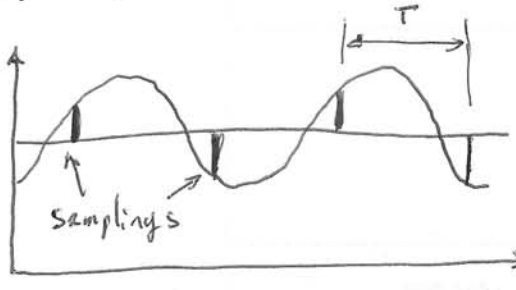
Measured = signal + AC noise(ωt)

with $\omega = 2\pi F$

$F = 60$ Hz

The measured signal is affected by 60Hz AC line.

b) Proposal



- Sampling rate = 120Hz
  ie $T = \frac{1}{120} = 8,33$ ms
- calculation of the mean value of two samples

Then, we get: $\text{Measured} = \frac{1}{2}\left[\underbrace{\text{signal} + \text{AC noise}(\omega t)}_{\text{1st sample}} + \underbrace{\text{signal} + \text{AC noise}(\omega t + T)}_{\text{2nd sample}}\right]$

As $\text{AC noise}(\omega t + T) = -\text{AC noise}(\omega t)$

we finally have : Measured = signal.

Conclusion: by sampling every 8,33 ms and performing the mean value of two following samples, you reject the 50Hz line noise.