VIB2019-Signal-Processing

Number of participants: 0

1

The discrete Fourier transform applies to

	any type of signal	0%	0 votes
	only random signals	0%	0 votes
✓	only periodic signals	0%	0 votes

2

The continuous Fourier transform applies to

✓ any type of signal		0%	0 votes
periodic signals only		0%	0 votes
harmonic signals only		0%	0 votes
it depends on the type of excitation of the system		0%	0 votes

3

The continuous Fourier transform of a rectangle (pulse) is

a cosine function	0%	0 votes
a sine function	0%	0 votes
✓ a sinc function	0%	0 votes
a complex function which cannot be computed analytically	0%	0 votes

4

Convolution in the time domain corresponds to

✓ multiplication in the frequency domain	0%	0 votes
convolution in the frequency domain	0%	0 votes
deconvolution in the frequency domain	0%	0 votes
division in the frequency domain	0%	0 votes

5

Aliasing happens when

The sampling frequency is too high with respect to the frequency content of the signal	0%	0 votes
✓ The sampling frequency is too low with respect to the frequency content of the signal	0%	0 votes

6

When using Fast Fourier Transform on sampled signals, you can increase the frequency resolution by

decreasing the time step of the sampling signal, keeping the total measurement time constant	0%	0 votes
increasing the time step of the sampling signal, keeping the total measurement time constant	0%	0 votes
✓ increasing the measurement time,	0%	0 votes

whatever the time step
of the sampling signal

7

When using FFT, the time step of the sample signal has an influence on

The frequency resolution of the FFT	0%	0 votes
✓ The maximum frequency of the FFT	0%	0 votes
It has no influence on the FFT	0%	0 votes

8

Suppose the sampling frequency of the accelerometer on your smartphone is 200 Hz. Up to what frequency can you measure acceleration signals ?

200 Hz		0%	0 votes
✓ 100 Hz		0%	0 votes
It depends on the length of the measurement		0%	0 votes