**You need to know the following topics for test 1 of Signals and Systems**

1- Find the power or the energy of a signal

2- Carry out signal operations such as time scaling and shifting

3- Expression of unit steps *u*(*t*) and unit impulse *δ*(*t*) and their plots

4- Determine if a system is linear, causal, and time-invariant

5- Derive the differential equation of a mechanical or an electrical system

6- Find the zero-input response

7- Find the impulse response *h*(*t*)

8- Convolution

9- Find the zero-state response

10- Determine if the system is internally stable or not