

Test N°01

Name:.....

Course questions (2 points)

1. Provide an example of signals with: Finite and infinite energy.
2. How to determine convolution?
3. The convolution product of the unit step function by itself is a ramp function: True False

Exercise 01 : (3 points)

Consider a signal $x(t)$ given by the following expression: $x(t) = |\sin(t)|$ $x(t) = |\sin(t)|$

- 1- Graphically represent $x(t)$.
- 2- $x(t)$ is periodic, what is its frequency?

Exercise 02 : (5 points)

1. Provide the mathematical expression of the signal $x_1(t)$ as shown in figure (a).
2. Calculate the energy and average power of the signal $x_1(t)$.
3. Give the expression of the signal shown in figure (b) using the result obtained in (1)

