

LICENCE - Option : « Mechanics constructions »

Matter : Dynamic structures.

Serial number 4, "Impulsive forced vibrations of 1 d.o.f. dynamic structures"

Exercise : 1 :

To protect a computer while it is being moved, the computer is placed in a padded case. The movement of the computer in the box can be modeled as an elementary model of 1 dof consisting of a mass and a spring.

- Determine the response of the computer in relation to the case, if it is subjected to an external load as shown in Figure 1(c)?

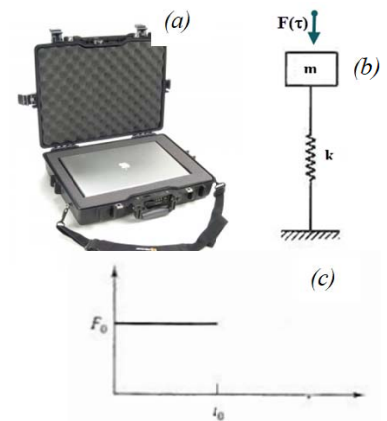
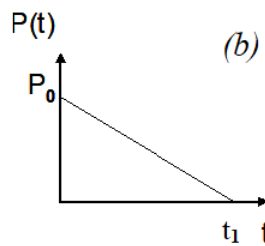
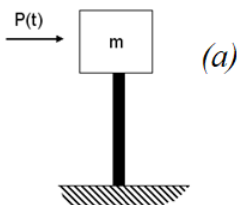


Figure 1

Exercise: 2 :



A water tower is subject to an external force (for example: wind) as represented by the following figure:

Curve of the triangle impulse excitation force.

Figure 2

1/ Find the tower's response?