

## **04OAGQD- Vibration mechanics (prof. Fasana) 2021-2022**

### **“Rotor on flexible supports”, 26<sup>th</sup> May 2022**

A short report will **possibly** be requested as the second official report, i.e. to add two extra points on the final mark.

This report should contain at least:

- 1) Free-body diagram of the 2DOF system
- 2) Equations of motion
- 3) A table including estimates of mass and moment of inertia of each disk, plate, shaft and rod (on the basis of the drawings, do not consider holes)
- 4) An estimate of the stiffness  $k$  of each thin beam, when the whole mass is moving along  $x$
- 5) Estimates of the natural frequencies (Hz)
- 6) A short comment about the reasons why the previous results differ from the experimental ones ( $f_1=8$  Hz and  $f_2=32$  Hz)

The pdf file should contain **max 3 pages**