

## Quiz 6

Name:

Date: 01.04.2023

### Question 1

Which transition is typically excited by photons with UV or visible wavelengths?

- Electronic
- Rotational
- Vibrational

### Question 2

Which one of these processes occurs on a timescale of  $\sim 10^{-12}$  s?

- Absorption
- Vibrational relaxation
- Fluorescence

### Question 3

What is the difference between the natural lifetime and the lifetime?

The natural lifetime represents the ideal case where an excited state decays only via spontaneous emission (radiative decay, either fluorescence or phosphorescence). The actual lifetime is what is measured and can be shorter due to additional non-radiative decay channels.