

## Quiz 10

Name:

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### Question 1

What does TCSPC measure?

- ☐ The natural lifetime
- ☐ The quantum yield
- ☒ The luminescence lifetime

### Question 2

What is an advantage of a gated detection? (multiple possible answers)

- ☒ Reduce the experimental noise
- ☐ Increase the detected signal intensity
- ☒ Separate two processes that have different timescales

### Question 3

In a transient absorption experiment, what happens when the probe reaches the sample prior to the pump?

The probe “sees” a sample that has not yet been excited by the pump, therefore there is no transient absorption signal. This would be equivalent to collecting the “normal” absorption spectrum of a sample in its ground state.