

End of Term LO W12

CH216 Thursday Sections: Infrared spectroscopy and NMR spectroscopy are among the most important topics that were discussed in 216 lectures this term. The following survey questions will be used by 216 instructors to determine your familiarity with the concepts associated with both forms of spectroscopy. We appreciate your cooperation in completing this survey, as it will allow us to improve instruction of spectroscopy now and in the future. Your responses to this survey will have no effect on your grade in the course.

Name (1)

Uniquename (2)

E-Mail (3)

Major (4)

GSI (5)

Q1 Indicate your familiarity with the following infrared spectroscopy terms and topics:

	1 (have not heard of) (1)	2 (have heard of, but am not familiar with) (2)	3 (somewhat familiar with) (3)	4 (I could explain this concept to someone else) (4)
Electromagnetic spectrum (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infrared light and its relative energy (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The relationship between energy wavelength (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The relationship between wavelength and wavenumber (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The interaction of light with matter (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Molecular vibrations (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wavenumbers (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Significance and origin of the units of wavenumbers (cm ⁻¹) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spectrum / spectra (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Functional group region (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fingerprint region (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stretch (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Band (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
What type of information that can be determined from an IR spectrum (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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<p>What type of information that cannot be determined from an IR spectrum (15)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>The difference between Infrared and NMR spectroscopy (16)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>The effect of hydrogen bonding on the position and shape of an alcohol stretch (17)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>The effect of molecular structure on the position of a carbonyl stretch (18)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2 Indicate your familiarity with the following nuclear magnetic resonance (NMR) spectroscopy terms and topics:

	1 (have not heard of) (1)	2 (have heard of, but am not familiar with) (2)	3 (somewhat familiar with) (3)	4 (I could explain this to someone else) (4)
Nuclear spin (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Significance and origin of parts per million (ppm) units (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Significance and origin of Sigma (σ) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
What type of information that can be determined from an NMR spectrum (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
What type of information can not be determined from an NMR spectrum (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integration (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chemical equivalency (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chemical shift (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Splitting (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coupling (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
^1H -NMR compared to ^{13}C -NMR (similarities and differences) (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isotopes (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NMR silent (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NMR active (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Upfield shifted (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Downfield shifted (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Q3 Please indicate whether you did or did not use the following learning resources to study infrared and NMR spectroscopy, and, if you did, how helpful you think it was to you, personally, in learning spectroscopy.

	Please Indicate Use		Please Rank Usefulness				
	Used (1)	Did Not Use (2)	Extremely Useless (1)	Useless (2)	Neutral (3)	Useful (4)	Extremely Useful (5)
Ege Organic Chemistry text (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lab manual (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Padias lab text (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Previous 216 exams, posted on CTools (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet sites (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning Objects (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VoiceThread (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 Please use the space below to comment on the Learning Objects and VoiceThread assignments that were used in your lab section. What was helpful about them and how could they be improved?