

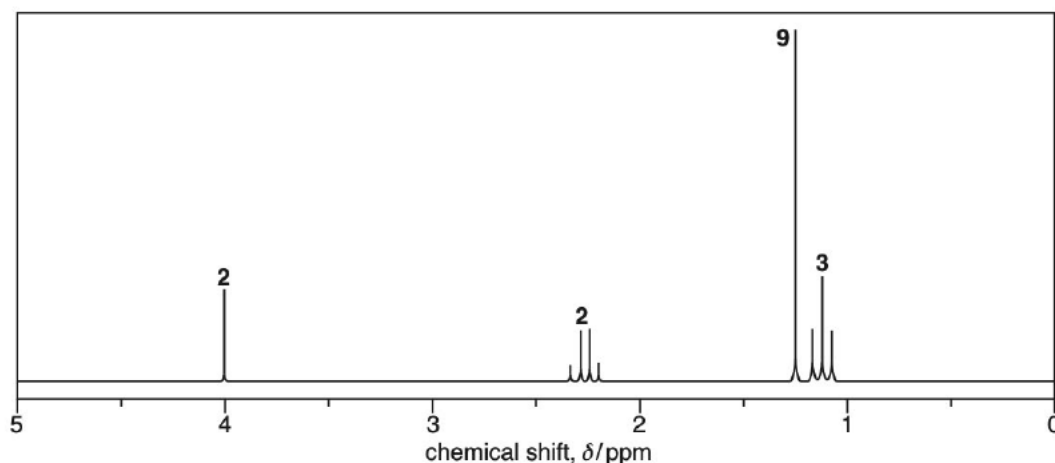
A level Chemistry A

H432/02 Synthesis and analytical techniques

Question Set 13

1.* Compound **L** is an organic compound containing carbon, hydrogen and oxygen only.

The ^1H NMR spectrum of compound **L** is shown below.
The numbers by the peaks are the relative peak areas.



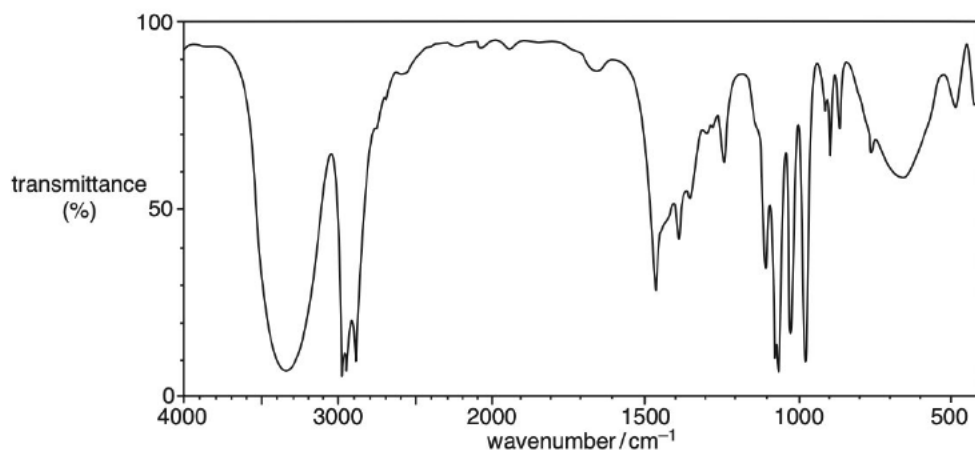
Compound **L** is refluxed with aqueous hydrochloric acid, forming two organic compounds **M** and **N**.

The infrared spectra of **M** and **N** are shown below.

Infrared spectrum of M

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Infrared spectrum of N



Use the information provided to suggest a structure for compound **L**.

Show **all** of your reasoning.

Total Marks for Question Set 13: 6

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