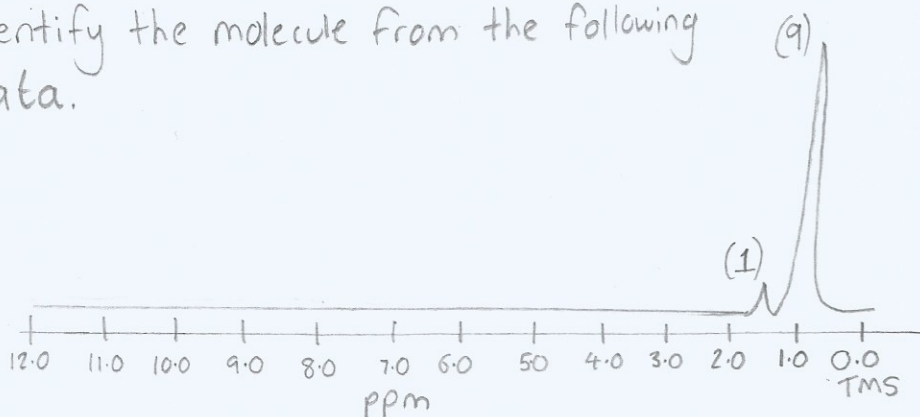


¹H NMR Questions

(1) Identify the molecule from the following data.



% mass of elements

82.76% C 17.24% H

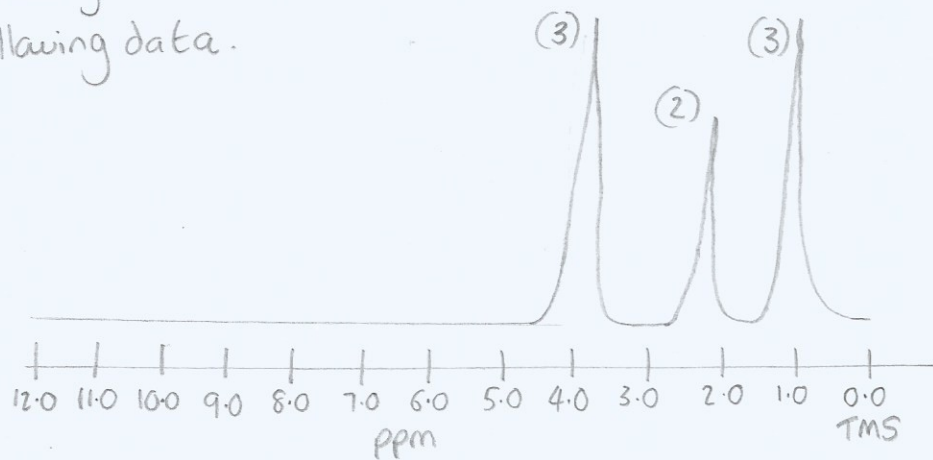
Infrared spectrum

peaks in $2850-2950\text{cm}^{-1}$

Molecular ion peak (mass spec)

58

(2) Identify the molecule from the following data.



% mass of elements

54.55% C, 9.09% H and 36.36% O

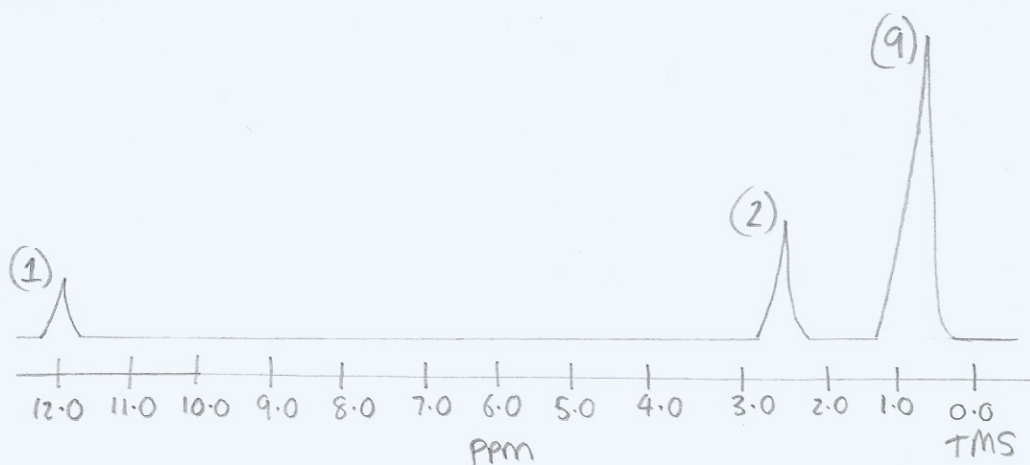
Infrared spectrum

Sharp, strong absorption at $1735-1750\text{cm}^{-1}$

Molecular ion peak (mass spec)

88

(3) Identify the molecule from the following data.



% mass of elements

62.07% C, 10.34% H and 27.59% O

Infrared spectrum

Strong, sharp absorption at $1700-1725\text{cm}^{-1}$

Moderate, broad absorption at $2450-3150\text{cm}^{-1}$

Molecular ion peak (mass spec)

116