



Oxford Cambridge and RSA

## **GCE A level Chemistry A (H432)**

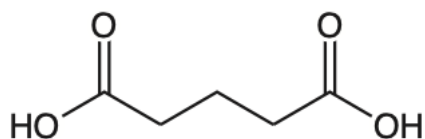
### **H432/02 Synthesis and analytical techniques**

#### **Question Set 7 MCQ**

#### **6.3 Analysis**

Multiple Choice Questions

1. The compound below is analysed by  $^1\text{H}$  NMR spectroscopy.



How many peaks are observed in the  $^1\text{H}$  NMR spectrum?

- A 5
- B 4
- C 3
- D 2

Your answer

[1]

2. Which compound is used as a standard for NMR chemical shift measurements?

- A  $\text{Si}(\text{CH}_3)_4$
- B  $\text{CDCl}_3$
- C  $\text{D}_2\text{O}$
- D  $\text{CCl}_4$

Your answer

[1]


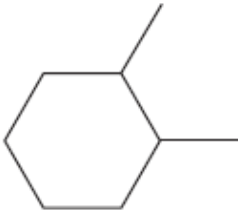
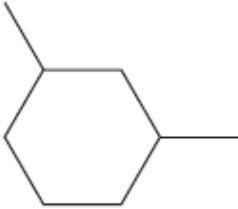

3. What is the number of peaks in the  $^1\text{H}$  NMR spectrum of  $\text{HOOCCH}_2\text{CHOHCH}_2\text{COOH}$ ?

- A 3
- B 4
- C 5
- D 6

Your answer

[1]

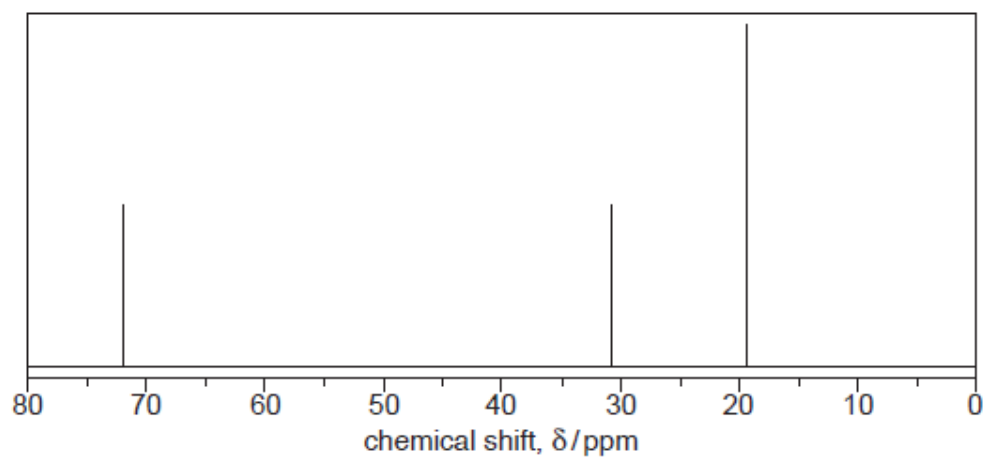
4. Which compound shows 4 peaks in its carbon-13 NMR spectrum?

A	
B	
C	
D	

Your answer

[1]

5. A compound produces the  $^{13}\text{C}$  NMR spectrum below.



Which compound could have produced this spectrum?

- A Propane
- B 2-Methylbutane
- C 2-Methylpropan-1-ol
- D 2-Methylpropan-2-ol

Your answer

[1]

**Total Marks for Question Set 7: 5**

---

# OCR

Oxford Cambridge and RSA

## **Copyright Information**

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website ([www.ocr.org.uk](http://www.ocr.org.uk)) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge