

Write your name here	
Surname	Other names
Centre Number	Candidate Number
Edexcel GCE Chemistry Advanced Subsidiary Unit 2: Application of Core Principles of Chemistry	Thurs day 21 Jan 2010 – Afternoon Time: 1 hour 30 minutes
Thurs day 21 Jan 2010 – Afternoon Time: 1 hour 30 minutes Paper Reference 6CH02/01	
Candidates may use a calculator.	Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
– *you should take particular care with your spelling, punctuation and grammar, as well as the clarity of expression, on these questions.*
- A Periodic Table is printed on the back cover of this paper.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

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Turn over ►

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SECTION A

Answer ALL the questions in this section. You should aim to spend no more than 20 minutes on this section. For each question, select one answer from A to D and put a cross in the box (☒). If you change your mind, put a line through the box (☒) and then mark your new answer with a cross (☒).

1 Which of the following bond angles occur in a molecule of ethanol, $\text{C}_2\text{H}_5\text{OH}$?

- ☐ A 90° and 180°
- ☐ B 104.5° and 180°
- ☐ C 104.5° and 109.5°
- ☐ D 109.5° and 120°

(Total for Question 1 = 1 mark)

2 Which of the following molecules is linear?

- ☐ A Carbon dioxide, CO_2
- ☐ B Sulfur dioxide, SO_2
- ☐ C Water, H_2O
- ☐ D Methanal, HCHO

(Total for Question 2 = 1 mark)

3 Which of the following molecules contains polar bonds but is **not** a polar molecule?

- ☐ A Chlorine, Cl_2
- ☐ B Hydrogen chloride, HCl
- ☐ C Trichloromethane, CHCl_3
- ☐ D Tetrachloromethane, CCl_4

(Total for Question 3 = 1 mark)

4 Which of the following has dipole-dipole interactions between its molecules, but no hydrogen bonding?

- ☐ A Methane, CH_4
- ☐ B Methanol, CH_3OH
- ☐ C Ammonia, NH_3
- ☐ D Hydrogen iodide, HI

(Total for Question 4 = 1 mark)



5 Which list below shows the compounds in order of <

9 This question is about the following compounds.

A Barium carbonate

B Lithium nitrate

C Potassium bromide

D Potassium nitrate

(a) Which compound gives a green colour in a flame test?

(1)

☐ A

☐ B

☐ C

☐ D

(b) Which compound gives a lilac colour in a flame test and does **not** decompose on heating?

(1)

☐ A

☐ B

☐ C

☐ D

(Total for Question 9 = 2 marks)

Use this space for any rough working. Anything you write in this space will gain no credit.



- 10 2

13 Chemical reactions may involve

14

(iii)

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