

12 Pages

1. Please give the information requested in the boxes below.
2. Enter your name in the space provided to the right, fold over and seal down (using the label provided) to hide your name.
3. The answers must be legibly written. The Examiners can either ignore illegible script or have it typed and the expense of typing charged to the candidate.
4. Write your answers in ink.
5. Begin each answer on a fresh page. Do all rough work in the answer book and cross it through.
6. No part of this book is to be torn out; it must be handed in complete.
7. If more books than one are used, fasten them together using the tags available from the invigilator(s).
8. **Every book must be handed in. In no circumstances may answer books, used or unused, be taken out of the examination venue.**

1	Student Number	2424920
2	Title of Examination Paper	OME chemistry
3	Module Code	ACDB4011
4	Date and Time of Examination	06/05/2025 09:00
5	Examination Venue	COULPORT BLDG 88
6	Seat Number	2
7	Number of Answer Books handed in	1

List the numbers of the questions you have attempted	Office Use
1	7.5
2	0.5
3	3
4	1
Total	~~11.5~~

(Gweler yr ochr arall am y fersiwn Cymraeg)

Complete, fold and seal
(see note 2 below)

SURNAME: Scally

FORENAME(S): VICTORIA

CHARLOTTE

7.5p

1. a) ~~False~~ TRUE ✓

FALSE ✓

b) Atomic ~~mass~~ number = Protons + neutrons.

c) False ✓

d) $H=1$ (2) $O=16$ False
 6.02×10^{23} = Avogadro's number.e) $2Al + 3O_2 \rightarrow 2Al_2O_3$
False. ✓~~True~~

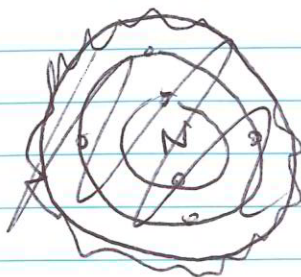
f) —

g) False ✓

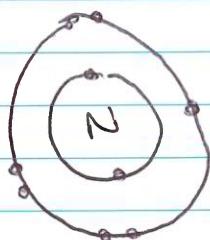
h) ~~True~~i) ~~False~~j) ~~True~~ Catalysts are used to increase the reactivity of a reaction

7.5

2. a)

b) ~~positive~~.

c)



one unbonded electron
in the outer shell
~~this gas is the~~

d) Nitrogen to nitrogen bonds are longer
and weaker, they are therefore easier
to split which means less energy
is required to separate them.

~~proper relationship~~

3. a) ~~or~~ $E = hf$ $E = 616 \times 10^{-6} \times 3 \times 10^8$ 0p
 $= 1848 \text{ Joules}$

b) Ca^{20}

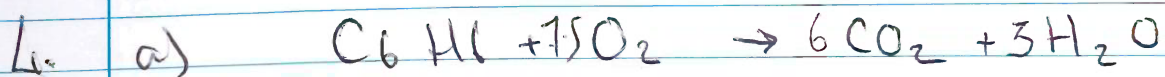
0p



c) The absorption and emission spectra principle speaks of the colours emitted from certain substances i.e metal when ~~they are~~ energy is added to them. The colours emitted relate to the electrons dropping down into their lower energy states and their wavelengths at this point.

3p

3



1p

$$C = 6$$

$$C = 1$$

$$H = 6$$

$$O = 2 \times 5$$

$$O = 2$$

$$H = 2 \times 6$$

b)

d

5