Name of the Student:_____
Max. Marks : 20 Marks **Time : 20 Minutes**

Mark Schemes

Q1.

(a) one relevant point correctly plotted
gains 1 mark

but two relevant points correctly plotted
gains 2 marks

but three relevant points correctly plotted
gains 3 marks

curved line drawn accurately through the points
for 1 further mark

4

(b) age of igneous rock = 400 ± 100 million years

1

(c) sandstone is a sedimentary rock
for 1 mark

there is likely to be some lead-207 present
or from the rocks from which the sandstone was formed
for 1 mark

(*allow* ^{207}Pb may not have come from this ^{235}U)

2

[7]

Q2.

A β / beta
B γ / gamma
C α / alpha
for 1 mark each

[3]

Q3.

(a) (Cobalt) 1

1

(Oxygen) 2

1

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(b) (i) the lithium compound / $LiCoO_2$

allow from air / atmosphere / water (vapour)

allow the battery

ignore cracks, fan, gaps, surroundings and computer

1

(ii) lithium oxide

if correctly named, ignore at attempts at formula

allow Li_2O the letters L and O must be uppercase, and the letter i lowercase and the number a subscript

ignore references to di, tri etc

*do **not** accept lithium hydroxide*

1

(c) A = proton

1

B = electron

1

C = neutron

1

(d) (i) any **two** from:

- lithium moves (about on surface)

or

lithium floats

- lithium gets smaller

allow lithium dissolves

ignore lithium melts

- bubbles (of gas)

allow fizzing / smoke

ignore flame, sparks, cloudy water, any colours

2

(ii) lithium hydroxide + hydrogen

in either order

allow LiOH for lithium hydroxide allow H_2 for hydrogen the letters L, O and H must be uppercase, and the letter i lowercase and the number a subscript

1

[10]

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