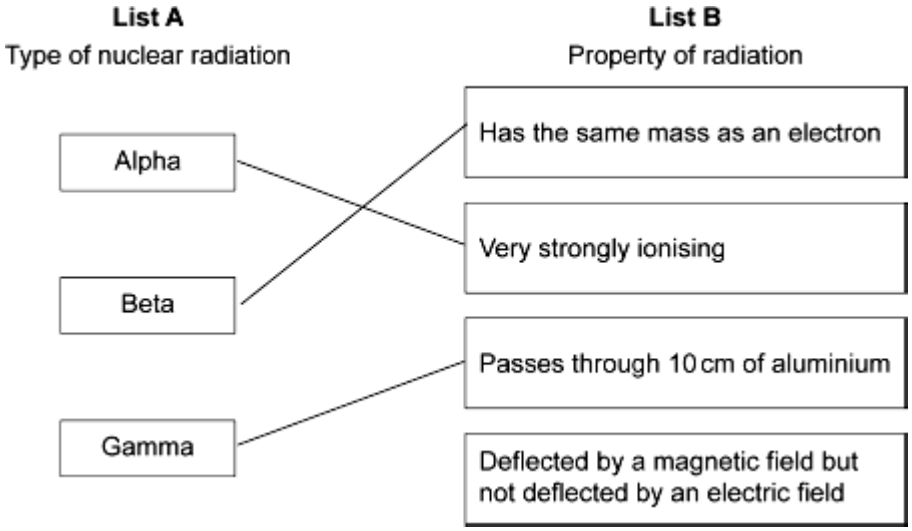
Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Mark Schemes

Q1.

(a) **1** mark for each correct line



*if more than 1 line is drawn from any box in List **A**, none of those lines gain any credit*

3

(b) (i) (the detector) reading had gone down

'it' equals detector reading

accept the reading in the table is the smallest

accept 101 is (much) lower than other readings / a specific value eg 150

*do **not** accept this answer if it indicates the readings are the thickness*

1

more beta (particles / radiation) is being absorbed / stopped

accept radiation for beta particles / radiation

accept fewer particles being detected

1

(ii) six years

1

(iii) alpha would not penetrate the cardboard

accept the basic property – alpha (particles) cannot pass through paper / card

accept alpha (particles) are less penetrating (than beta)

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range in air is neutral

1

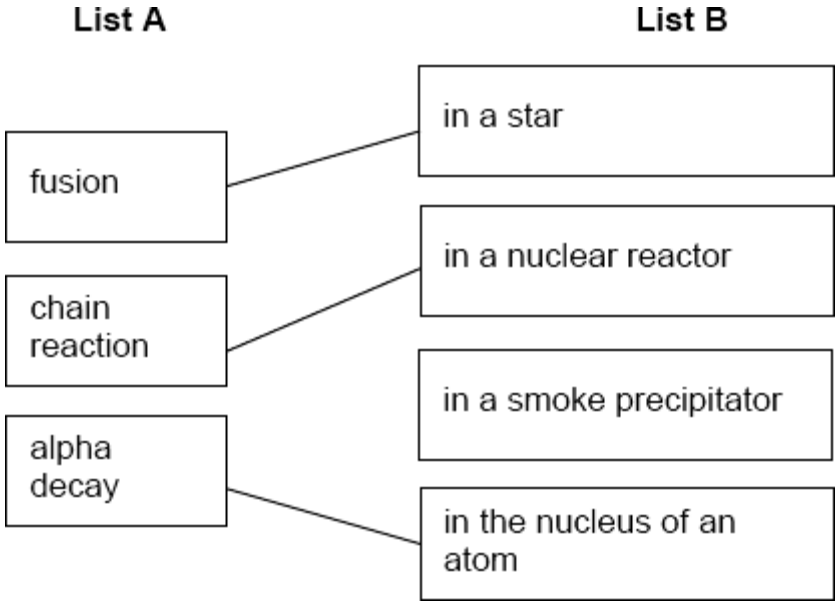
[7]

Q2.

three lines correct

*allow **1** mark for each correct line*

*if more than 1 line is drawn from a box in **List A**, mark each line incorrect*



[3]

Q3.

(a) electron(s)

1

(b) 3rd box ticked

The model cannot explain the results from a new experiment

1

(c) all three correct

Particle
Proton
Electron
Neutron

*allow **1** mark for 1 correct*

2

[4]

Q4.

(a) (i) **L**

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1

(ii) **M**

1

(b) To make a smoke detector work.

1

(c) **40**

no tolerance

1

[4]

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