M1. (a) gravitational

accept gravity

*do **not** accept weight*

1

(b) (i) planet(s)

accept comet(s)

accept asteroid(s)

*do **not** accept moon(s)*

1

(ii) balanced

accept equal / the same / are in equilibrium

1

(iii) Milky Way

accept milky way

1

[4]

M2. (a) dust

accept 'solid (s)'

1

space

accept 'from supernova / supernovum / supernovas'

1

(b) By atoms joining together

only one ticked or otherwise unambiguously identified

1

(c) Milky Way (galaxy)

1

(d) The answer depends on beliefs and opinions, not scientific evidence.

only one ticked or otherwise unambiguously identified

1

[5]

M3. (a) uranium-235

accept any correct indication

1

(b) splits / breaks (into two smaller parts)

nucleus is separated is insufficient

*do **not** accept atom splits – on its own*

1

and (two / three) neutrons

1

(c) steam

correct order only

1

turbine

1

generator

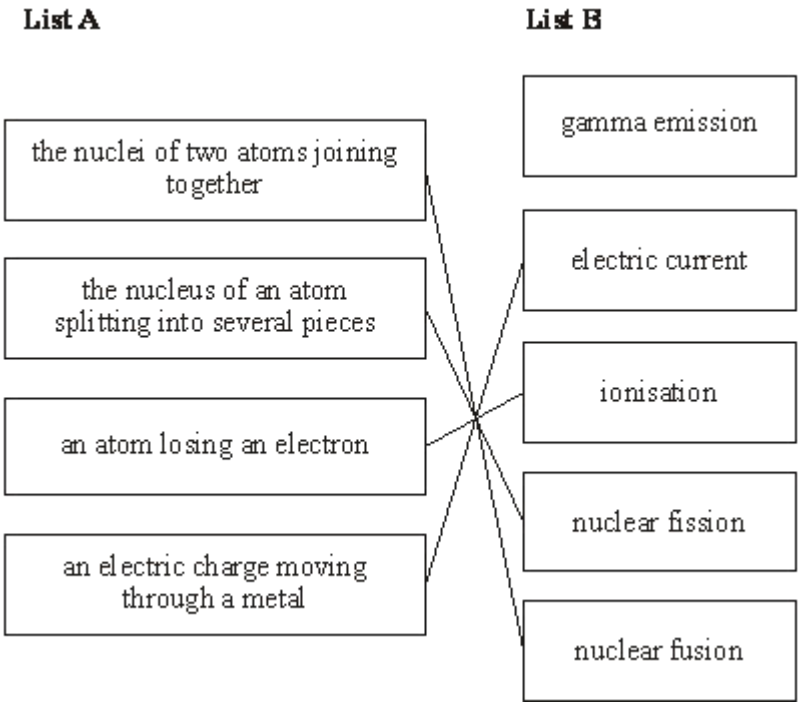
1

[6]

M4. **four** 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



[4]

M5. (a) (i) protostar

correct order only

1

red giant

1

black dwarf

1

(ii) Alpha Centauri A

accept any correct indication, eg alpha, centauri, A

reason only scores if Alpha Centauri A is chosen

1

stars (about) same size as Sun form white / black dwarfs

or

very large stars form red super giants / supernova/black hole

it is the same size as the Sun is insufficient

same life cycle as the Sun is insufficient

1

(b) Atomic nuclei inside the star join together

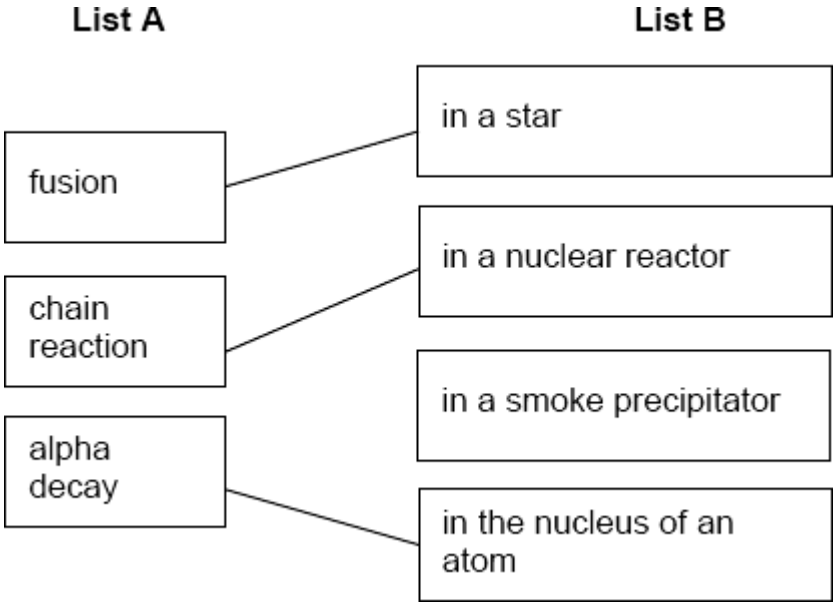
1

[6]

M6.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]