

Mark schemes

Q1.

- (a)

protons

this order only

1
- neutrons

1

- (b)

the time taken for half the nuclei in a sample to decay

1

- (c)

carbon-18

1

(d)

Term	Example
Radioactive contamination	Exposure to a beam of gamma rays
	Exposure to ultraviolet radiation from the Sun
	Accidental transfer of plutonium onto a human body
Nuclear irradiation	Using a mobile phone

1 mark for each correct line

additional line from a box on the left negates the mark for that box

2

- (e)

to remove radioactive dust from their shoes

1

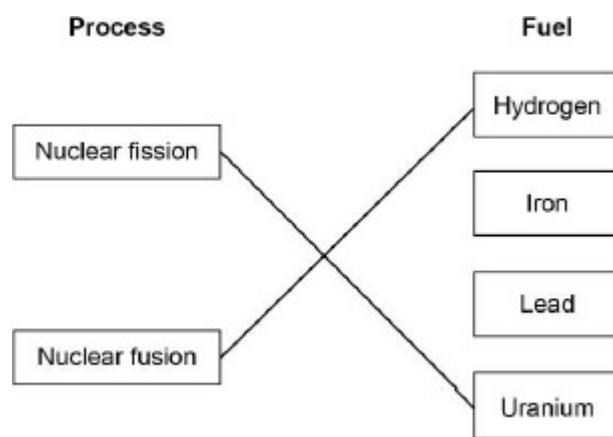
- (f)

$$\text{number of days} = \frac{0.072}{0.00050}$$

1
- number of days = 144

1

(g)



1 mark for each correct line

additional line from a box on the left negates the mark for that box

2

[11]