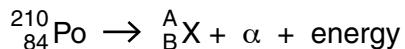


- 7 In the decay of a nucleus of $^{210}_{84}\text{Po}$, an α -particle is emitted with energy 5.3 MeV.

The emission is represented by the nuclear equation



- (a) (i) On Fig. 7.1, complete the number and name of the particle, or particles, represented by A and B in the nuclear equation.

	number	name of particle or particles
A		
B		

Fig. 7.1

[1]

- (ii) State the form of energy given to the α -particle in the decay of $^{210}_{84}\text{Po}$.

..... [1]

- (b) A sample of polonium $^{210}_{84}\text{Po}$ emits 7.1×10^{18} α -particles in one day.

Calculate the mean power output from the energy of the α -particles.

power = W [2]

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.