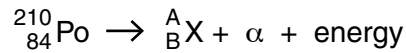


- 7 In the decay of a nucleus of  $^{210}_{84}\text{Po}$ , an  $\alpha$ -particle is emitted with energy 5.3 MeV.

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  $\alpha$ -particle in the decay of  $^{210}_{84}\text{Po}$ .

.....[1]

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

Calculate the mean power output from the energy of the  $\alpha$ -particles.

power = ..... W [2]

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