

9 A teacher measures the count from a radioactive source over a 20 minute period.

(a) Name an instrument the teacher should use to detect the radiation emitted from the source.

(1)

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(b) (i) State two sources of background radiation.

(2)

1

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2

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(ii) Describe the procedure the teacher should follow to measure the background radiation and correct the count measurement.

(3)

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- (c) The radioactive source used by the teacher emits beta radiation.

Describe how the nucleus of an atom is changed by the emission of a beta particle.

(2)

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- (d) State two ways that the teacher can reduce the risks when working with radioactive sources.

(2)

1

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2

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(Total for Question 9 = 10 marks)

