Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic: Atomic Structure (Standard Demand)

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Name of the Student:_____
Max. Marks : 16 Marks **Time : 16 Minutes**

Mark Schemes

Q1.

(a) (i) and (ii) in any order

1

(i) alpha

accept Greek symbol (α)

1

He^{2+} **or** $^{4}_{2}He$

1

(ii) beta

accept Greek symbol (β) ***or*** *electron*

1

e^{-} or $^{0}_{-1}e$

mass and automatic numbers are not required

accept e

1

(b) (i) alpha

accept symbol

1

(ii) decreases

then stops (entirely) **or** after a few cm

accept stops because α can only travel a few cm in air

1

(c) it's gamma

accept its not ionising ***or*** *it is not charged* ***or*** *it's not* α *or β because a spark counter only measures α or β*

1

[8]

Q2.

(a) at least **6** points correctly plotted

gains 1 mark

(to better than half a square) **but all** points correctly plotted

gains 2 marks

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2

any **line** graph related to plotted points;
point (3,29) discounted;
best fit smooth curve

each for 1 mark

3

(b) radiation decreases with time

gains 1 mark

but decreases quickly at first then more slowly

gains 2 marks

but *idea that* it (about) halves every 2 weeks **or** half-life is (about) 2 weeks

gains 3 marks

3

[8]

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