Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic : 6_Radioactivity

Name of the Student:_____
Max. Marks : 10 Marks **Time : 10 Minutes**

Mark Schemes

Q1.

	Answer	Additional guidance	Mark
(i)	beta, beta (minus), β, β^-	accept beta(plus), β^+	(1) AO1

	Answer	Additional guidance	Mark
(ii)	Geiger-Muller (tube)/ G-M (tube)/ GM (tube)/ Geiger (counter)	accept ratemeter do not accept radiation meter accept phonetic spellings e.g. Giga	(1) AO1

	Answer	Additional guidance	Mark
(iii)	one from more (radiation) passes through (the paper) (1) OR less (radiation) is absorbed (by the paper) (1) OR less paper (for radiation) to pass through/penetrate(1)	penetrates/gets through allow easier to pass through Ignore name of particle if given	(1) AO2

	Answer	Additional guidance	Mark
(iv)	Calculation of 5% of count rate (1) $\frac{4000 \times 5}{100}$ or 4000 x 0.05 = 200 evaluation (1) 4000 +200 = 4200	accept use of any percentage between 4% and 5% accept any value between 160 and 200 ecf for addition of incorrect calculated percentage and 4000 award full marks for any answer that rounds to 4200 without working	(2) AO2

Q2.

Question number	Answer	Mark
(i)	☒ **A** 38 B is number of neutrons C is mass number D is an irrelevant addition of two numbers	(1)

Question number	Answer	Mark
(ii)	☒ **B** 52 A is number of protons C is mass number D is an irrelevant addition of two numbers	(1)

Q3.

Question Number	Answer	Mark
	B 10^{-10} m	(1)

Q4.

Question number	Answer	Additional guidance	Mark
	D it does not change A, B and C are incorrect because the number of nucleons does not change in gamma emission		**1** **AO1.1**

Q5.

	Answer	Mark
	D gamma **A,B** and **C** all carry a charge	**(1)** **AO1**