

Name of the Student: _____

Max. Marks : 8 Marks

Time : 8 Minutes

Q1.

- (a) Sam and Kris are arguing about alpha and gamma radiation.

Sam says that alpha radiation is more dangerous.

Kris disagrees. He thinks that gamma radiation is more dangerous. What do you think?
Explain your answer as fully as you can.

(4)

- (b) Cancer cells in a particular organ of the body can be killed by injecting a radioactive substance which is absorbed by that organ.

What other features must the radioactive substance have to make it suitable for this job?

(2)

- (c) Radon is a radioactive gas with a half-life of 3.6 days.
It often seeps into buildings from the ground.

Estimate how long it takes for 99% of a sample of radon gas to decay.
(Show your working.)

(2)

(Total 8 marks)