Chapter 3·5 Exam Q Year 11

Question 1

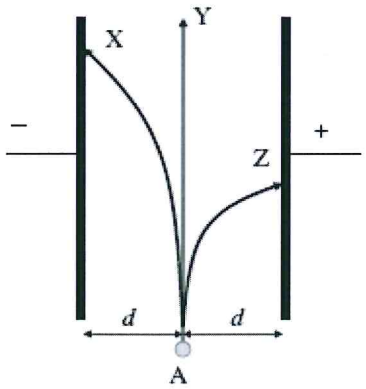
(3 marks)

In a uranium mine the workers are lowered into the mine shaft in an enclosed metal lift. If alpha, beta and gamma radiation are all emitted by the rocks around the lift shaft, state the main radiation type or types the workers are exposed to inside the lift. Justify your answer.

Question 2

(1 mark)

There is a uniform electric field between two charged parallel plates as shown below. Three particles (α, β and γ) are ejected from A into the field parallel with the plates with similar velocities. Their paths (X, Y and Z) are shown on the diagram below.



The particles and their paths are best named as

A	X = γ	Y = β and	Z = α
B	X = α	Y = β and	Z = γ
C	X = β	Y = α and	Z = γ
D	X = α	Y = γ and	Z = β
E	X = γ	Y = α and	Z = β
F	X = β	Y = γ and	Z = α

Question 3

(4 marks)

A geologist is using a Geiger counter to test some rocks for radioactivity and finds one that gives off radiation. Describe a simple experiment that could be done to determine whether the radiation is alpha, beta or gamma.