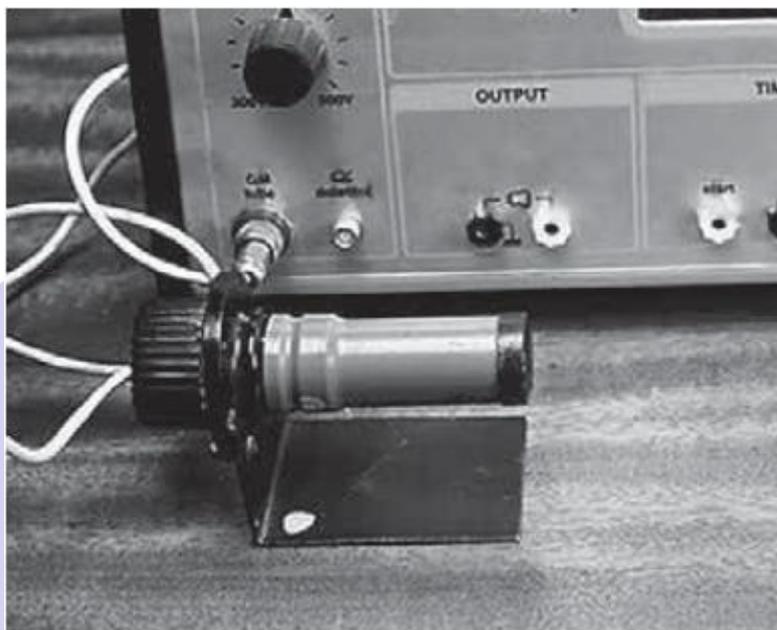


Q1.

Figure 4 shows a Geiger-Müller (GM) tube used for measuring radioactivity.



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Figure 4

One radioactive source used in hospitals is technetium (Tc).

Technetium is produced from the radioactive decay of molybdenum (Mo).

Complete the following nuclear equation.



(1)

(Total for question = 1 mark)

Q2.

Answer the question with a cross in the box you think is correct . If you change your mind about an answer, put a line through the box  and then mark your new answer with a cross .

Figure 11 is the symbol for a nucleus of americium-241.

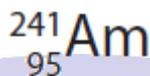


Figure 11

Americium-241 is a radioactive isotope of americium.

Americium-241 decays by emitting alpha ( $\alpha$ ) particles.

Complete the equation in Figure 12 for americium-241 decaying into neptunium (Np).



Figure 12

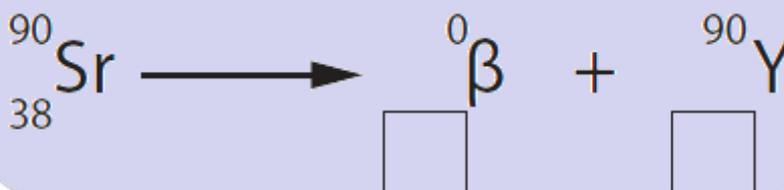
(3)

(Total for question = 5 marks)

Q3.

Strontium-90 is the source of beta minus radiation in this investigation.

Complete the nuclear equation for this emission of beta minus radiation.



(2)

(Total for question = 6 marks)