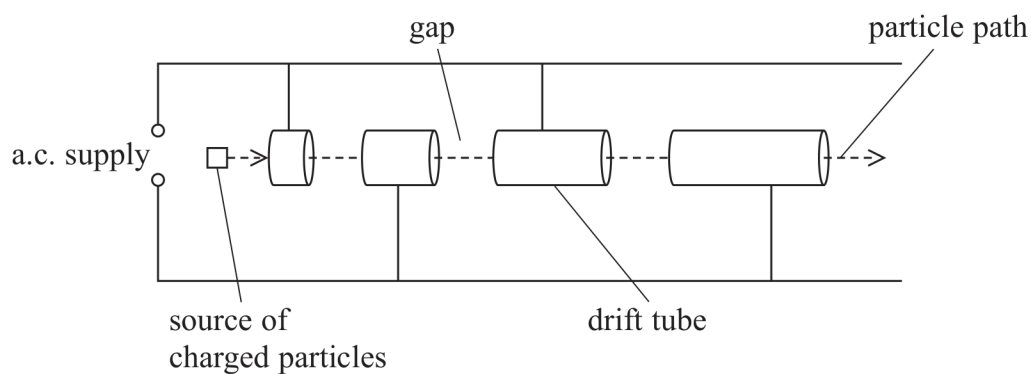


13 Linacs and cyclotrons both accelerate charged particles to very high speeds.

(a) The diagram shows a linac.

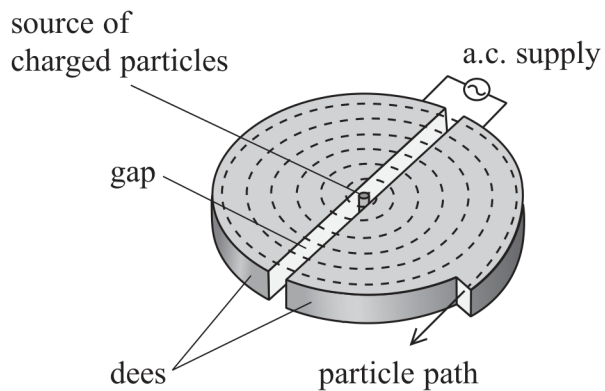


Explain the use of electric fields in a linac.

You should refer to the frequency of the a.c. supply.

(4)

(b) The diagram shows a cyclotron.



Explain why a magnetic field is applied at right angles to the dees in the cyclotron.

(2)

(Total for Question 13 = 6 marks)