

**Supplementary Problems (S- ):**

13. An electron is moving North with an initial speed of  $2 \times 10^5$  m/s through a magnetic field directed down of strength 152 Gauss.

- a) What is the magnitude and direction of the magnetic force on the electron?
- b) What is the magnitude of the acceleration of the electron?

**Answers to Supplementary Problems:**

13. a)  $4.86 \times 10^{-16}$  Nt directed East; b)  $5.35 \times 10^{14}$  m/s<sup>2</sup>.