

Chapter 27 – Suggested problems

1, 5, 7, 16, 18, 24, 27, 28, 35, 39, 45, 54, 59, 68, 73, 76

Solutions of even suggested problems

(16) a) $B = 0.294 \text{ T}$
b) $t = 1.11 \times 10^{-7} \text{ s}$

(18) a) $R = 0.673 \text{ mm}$
b) $v = \text{constant}$
c) $a = 1.88 \times 10^{12} \text{ m/s}^2$

(24) $B = 1.67 \times 10^{-3} \text{ T}$

(28) a) $v = 3.38 \times 10^6 \text{ m/s}$
b) v to left (x-axis), E down (y axis), B out of plane and perpendicular
c) $R = 4.17 \times 10^{-3} \text{ m}$, $T = 7.74 \times 10^{-9} \text{ s}$

(54) $F_x = 0$, $F_y = 2.49 \times 10^{-3} \text{ N}$, $F_z = 1.32 \times 10^{-3} \text{ N}$

(68) $a = 5.88 \text{ m/s}^2$ upward

(76) a) 0.03 N m (-j)
b) 0.017 Nm (+j)