PHYS 321 Problem 20.21 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



20.21 A bar of an iron–silicon alloy having the B–H behavior shown in the Figure above is inserted within a coil of wire 0.20 m long and having 60 turns, through which passes a current of 0.1 A.

(a) What is the applied magnetic field, H?(b)What is the B field within this bar?

(c)At this magnetic field,

(i)What is the permeability?

(ii)What is the relative permeability?

(iii)What is the susceptibility?

(iv)What is the magnetization?