

Consider a cubic meter box of uniform magnetic field of 1 Tesla and a cubic meter box of uniform electric field of 1 Volt/meter. Which box contains the most energy?

- A. The box of magnetic field
- B. The box of electric field
- C. They are both the same
- D. Not enough information given

Two long solenoids, A and B, with same current  $I$ , same turns per length  $n$ . Solenoid A has twice the diameter of solenoid B.

Energy =  $U$ , energy density =  $u = U/V$ .

A)  $U_A > U_B$  ,  $u_A = u_B$

B)  $U_A = U_B$  ,  $u_A < u_B$

C)  $U_A > U_B$  ,  $u_A < u_B$

D)  $U_A > U_B$  ,  $u_A > u_B$

E) None of these

