*Rise/fall of the magnetic flux density in an iron core.* Assume that the core in Fig.Q5.6 is made of iron. If the current $I$ of the coil is increased gradually and smoothly from zero to a very large value, the value of the magnetic flux density, $B$, in the core

(A) rises at approximately the same rate during the entire process.
(B) rises slowly first and more rapidly later.
(C) rises rapidly first and more slowly later.
(D) does not change.
(E) first rises and then falls.
(F) rises and falls in a cyclic fashion.

*Solution:* (C)
*Answer:* (C)