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*Uniform magnetic field.* In a certain region in free space, there is a uniform magnetic field, with flux density  $\mathbf{B}_0$ . The volume current density in that region

- (A) does not vary with spatial coordinates and is nonzero.
- (B) is zero.
- (C) varies with spatial coordinates (in a certain region).
- (D) need more information.

*Solution:* (B)

*Answer:* (B)