Nonuniformly magnetized ferromagnetic body. The magnetization vector in a ferromagnetic body is given by $\mathbf{M} = M(x)\mathbf{a}_y$. The magnetization volume current density vector inside this body can be represented as

(A) $\mathbf{J}_m = J_m(x)\mathbf{a}_x$.
(B) $\mathbf{J}_m = J_m(x)\mathbf{a}_y$.
(C) $\mathbf{J}_m = J_m(x)\mathbf{a}_z$.
(D) $\mathbf{J}_m = J_m(y)\mathbf{a}_x$.
(E) $\mathbf{J}_m = J_m(z)\mathbf{a}_x$.
(F) $\mathbf{J}_m = 0$.

Solution: (C)
Answer: (C)