A open-loop transfer function is given as,

$$G(s) = \frac{1}{s^3 + 2.0s^2 + 3.02019s + 4.04039}$$

which of the following PI-controllers does not stabilize the system in a closed-loop unit feedback structure?

(a) $F(s) = -2.51009 + \frac{0.25252}{s}$

(b) $F(s) = 1.01009 + \frac{1.02019}{s}$

(c) $F(s) = -0.98991 + \frac{2.02019}{s}$

(d) $F(s) = -0.98991 + \frac{1.01009}{s}$

(e) $F(s) = -5.98991 + \frac{1.01009}{s}$

Answer: $F(s) = -2.51009 + \frac{0.25252}{s}$