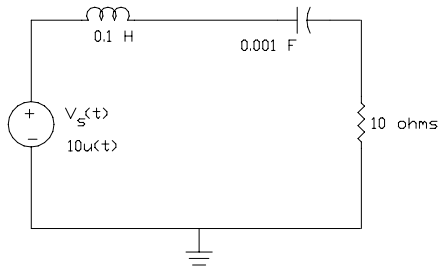ET 438a
Continuous and Digital Control
Laplace Transform of Dynamic Systems

1.) Write the integro-differential equation that describes the loop current response of the circuit below and then convert it to an algebraic equation using the Laplace transform.

2.) Write the Laplace formula that describes the velocity response of the system below to the force $F(t) = 5\sin(0.1t)$