

PHYSICS – 201
(Term 071)
QUIZ # 2

Instructor: Dr. Al-Solami

Student's Name _____ ID # _____ Sec _____

Q. 1 In an oscillating LC circuit, $L=30$ mH and $C=30\mu\text{F}$. At $t=0$ the charge on the capacitor is zero and the current is 3.0 A.

- a) Find the maximum charge that will appear on the capacitor
- b) At what earliest time $t > 0$ is the rate at which energy is stored in the capacitor is greatest and what is that rate.

Q. 2 What resistance should be connected in series with $L=200$ mH and $C=10\mu\text{F}$ for the charge on the capacitor to decay to 99.0% of its initial value in 50 cycles. (Assume $\omega^L=\omega$).