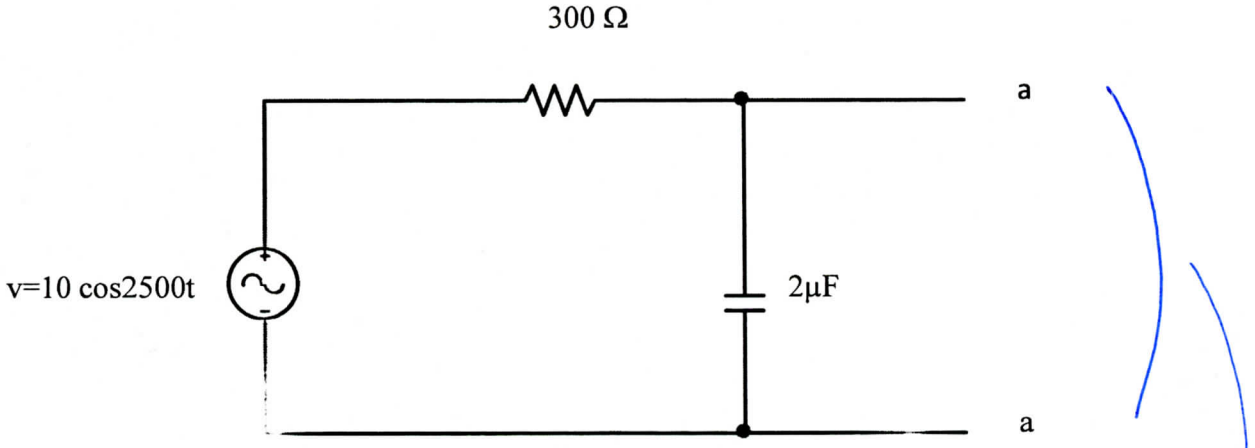
York University

Dept. of Electrical Engineering and Computer Science

EECS2200
Electric Circuits
Quiz 3 – 25 minutes
Dec. 4 2014

Question 1 – 5 points

Find the Norton equivalent circuit between points a and b



$X_C = \frac{1}{j\omega C} = \frac{1}{j \times 2500 \times 2 \times 10^{-6}} = -j200$

Short circuit current, short a & a

$I_N = \frac{10\angle 0}{300\angle 0} = 0.033\angle 0 \text{ A}$

$$Z_N = Z_{Th} = \frac{Z_1 Z_2}{Z_1 + Z_2}$$

$$= \frac{-j200 \times 300}{300 - j200}$$

$$= 92.3 - j138.5$$

$$= 166 \angle -56$$