$\qquad$
a. For the $R C$ parallel combination shown at right, what is the angular frequency at which the magnitude of the equivalent impedance be equal to $250 \Omega$ ?
$\omega=$ $\qquad$

b. What is the phase angle of the impedance at the frequency calculated in part (a) above?
$\theta=$ $\qquad$
c. At what angular frequency is the phase angle of $Z_{e q}$ equal to $-45^{\circ}$ ?
$\omega=$ $\qquad$
d. What is the magnitude of the impedance at the frequency calculated in part (c) above?

$$
\left|Z_{e q}\right|=
$$

$\qquad$
e. What is the magnitude of the impedance as $\omega \rightarrow 0$ ?

$$
\left|Z_{e q}\right|=
$$

$\qquad$
f. What is the magnitude of the impedance as $\omega \rightarrow \infty$ ?

$$
\left|Z_{e q}\right|=
$$

$\qquad$

