

**G002 Online Test**

Ref149

A sine wave voltage of 240V RMS is applied to a resistive circuit of 60Ω. Calculate(a) RMS value of current (b) Maximum value of current.

A	2A, 4A	B	1A, 2A
C	2A, 2.8A	D	4A, 5.65A
Answer			

Ref150

A coil of negligible resistance draws a current of 0.2A (RMS) when connected to 240V, 50HZ.  
(a) Determine inductive reactance (b) Coil inductance.

A	600Ω , 3.8 H	B	1200Ω , 1.9 H
C	1800Ω , 7.6 H	D	1200Ω , 3.8 H
Answer			

Ref151

A 64 mH inductor is connected in series with a 300Ω resistor to a 1000HZ AC supply voltage of 10V rms. Find (a) the impedance (b) The phase angle (c) The current (d) the potential drop across resistor.

A	500Ω ,( 0 Deg), 0.002A (-0 Deg), 6V,8V	B	500Ω ,( 36.8 Deg), 0.001A (+53.2Deg), 8V,6V
C	500Ω ,( 53.2 Deg), 0.002A (-53.2Deg), 6V,8V	D	500Ω ,( 90 Deg), 0.002A (-90 Deg), 6V,8V
Answer			

Ref152

Find the current in the circuit when an AC voltage 10V rms at 1000HZ is applied to 2 μF capacitor.

A	0.375A	B	0.125A
C	0.25A	D	0.5A
<b>Answer</b>			

Ref153

A 1  $\mu\text{F}$  capacitor is connected in series with 200  $\Omega$  resistor to 10V rms. 1600HZ supply. Find (a) the impedance (b) The phase angle (c) The current (d) Potential drop across resistor (e) Potential drop across capacitor.

A	111.3 $\Omega$ ,(-26.5 Deg), 0.0224A (-26.5Deg), 4.5V,2.24V	B	222.6 $\Omega$ ,( +26.5 Deg), 0.0224A (-26.5Deg), 9V ,4.48V
C	222.6 $\Omega$ ,(-26.5 Deg), 0.0448A (+26.5Deg), 9V ,4.48V	D	222.6 $\Omega$ ,( 0 Deg), 0.0224A (0 Deg), 9V ,4.48V
<b>Answer</b>			

Ref154

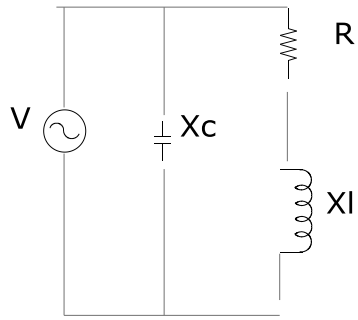
A series circuit is connected to a 10V rms AC supply. The circuit has resistance 100  $\Omega$ , inductive reactance 300  $\Omega$  , capacitive reactance 400  $\Omega$ . Find (a) Impedance (b) Current (c) Phase angle (d) Voltage drop across resistor (e) Voltage drop across inductor (f) Voltage drop across capacitor.

A	141 $\Omega$ (Angle 0 Deg),0.071A, 0 Deg, 7.1V, 21.3V, 28.4V	B	70.7 $\Omega$ (Angle +45 Deg), 0.035A, 45 Deg, 3.35V, 10.65V,14.2V
C	141 $\Omega$ (Angle 45 Deg), 0.071A,-45 Deg7.1V, 28.4V, 21.3V	D	141 $\Omega$ (Angle -45 Deg), 0.071A, 45 Deg, 7.1V, 21.3V,28.4V
<b>Answer</b>			

Ref155

The following is a diagram of a parallel circuit with a supply voltage 100V rms at 50Hz.Determine the followings.

(a)Total circuit current (b) Total circuit impedance (c) Phase angle between circuit current and applied voltage (d) Power factor of circuit.



$X_c = 318.5 \Omega$ ,  $R = 100 \Omega$ ,  $X_L = 94.2 \Omega$ ,  $V = 100 \text{ V}$ ,  $50 \text{ Hz}$

A	1.8A (Angle -36.8 Deg), 206 $\Omega$ , 56.86 Deg, 0.8	B	0.97A (Angle +36.8 Deg), 103 $\Omega$ , 36.8 Deg 0.59
C	0.97A (Angle +53.2 Deg), 206 $\Omega$ , 53.2 Deg 0.59	D	0.97A (Angle -36.8 Deg), 103 $\Omega$ , 36.8 Deg 0.59
<b>Answer</b>			

Ref156

A capacitor draws 0.971 Amp at PF 0.34 from 100V supply. Total power is

A	36.8W	B	52.43W
C	100W	D	70.7 W
<b>Answer</b>			

Ref157

The phase voltage and current in 3 phase star connected current are 240V and 50A. Find the line voltage and line current.

A	415V rms, 50A	B	240V rms, 50A
C	240V rms, 86.5A	D	415V rms, 86.5A
<b>Answer</b>			

Ref158

A delta connected load takes a line current 40A and line voltage 415V. Find (a) Phase current (b) Phase voltage

A	23.1A, 240V	B	23.1A, 415V
C	40A, 240V	D	40A, 415V
<b>Answer</b>			

Ref159

Three phase 415V, 37.3 KW, Delta connected alternator has efficiency 90% and PF 0.88 Lagging. Find  
(a) Line current (b) Phase current.

A	130A, 75.6A	B	65.5A, 37.8A
C	65.5 A, 75.6A	D	130A, 37.8A
Answer			