

**G042 Online Test**

Ref353

300 km line, the conductor diameter is 1 cm, the conductor diameter is 1 cm, the distance between conductor is 1 m. Line inductance and line capacitance.

A	0.276H, $0.012 \times 10^{-9}$ F/m	B	0.54H, $0.024 \times 10^{-9}$ F/m
C	0.81H, $0.072 \times 10^{-9}$ F/m	D	01.8H, $0.014 \times 10^{-9}$ F/m
<b>Answer</b>			

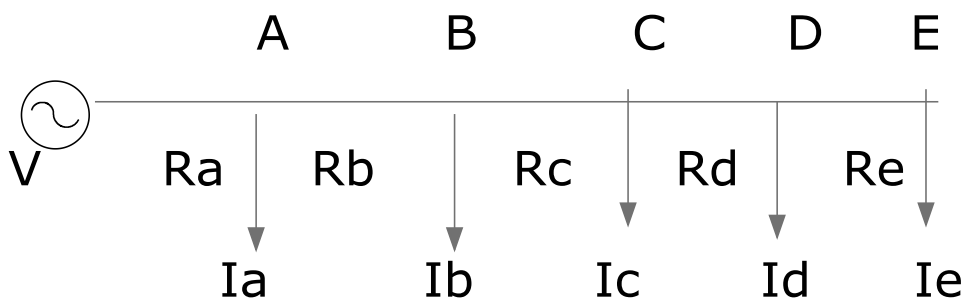
Ref355

A load of  $75 + j50 \Omega$  is to be matched to a  $50 \Omega$  transmission line using a  $\lambda / 4$  matching section. Determine the proper location and characteristics impedance of the matching section.

A	120 $\Omega$ , 50 $\Omega$	B	240 $\Omega$ , 10 $\Omega$
C	360 $\Omega$ , 15 $\Omega$	D	480 $\Omega$ , 20 $\Omega$
<b>Answer</b>			

Ref357

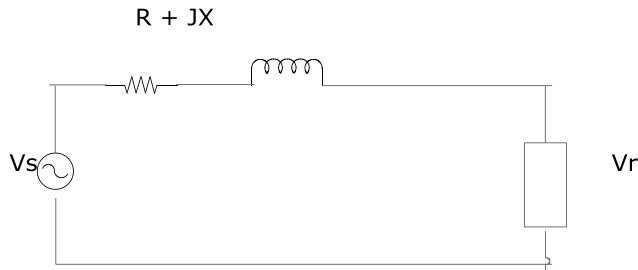
The following is the arrangement of 240V dc supply , calculate the efficiency.



$R_a = 0.2 \Omega$ ,  $R_b = 0.6 \Omega$ ,  $R_c = 0.4 \Omega$ ,  $R_d = 0.6 \Omega$ ,  $R_e = 0.4 \Omega$   $I_a = 30A$ ,  $I_b = 20A$ ,  $I_c = 30A$ ,  $I_d = 40A$ ,  $I_e = 50A$

A	50%	B	15%
C	25%	D	75%
<b>Answer</b>			

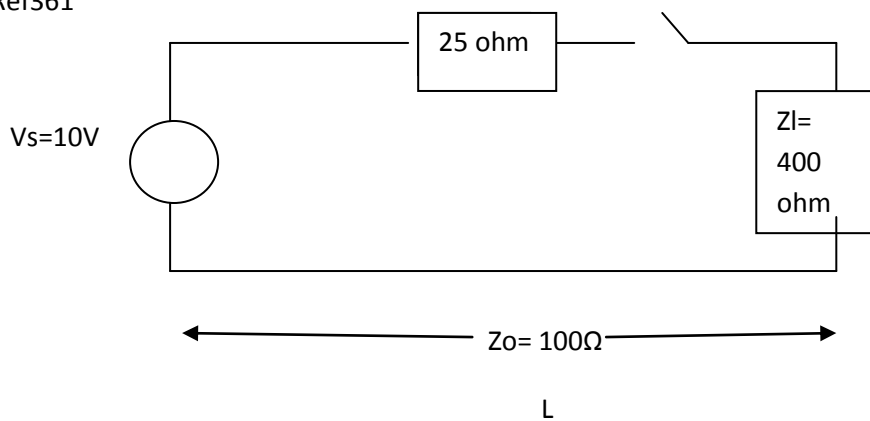
Ref359



In above circuit, the load consumes 1500 watt at PF 0.8 & voltage of 460V . Line impedance  $Z$  in  $2+j5$  ohm. Find (a)  $V_s$  for lagging PF (b) Leading PF.

A	300V, 200V	B	150V, 100V
C	490V, 445 V	D	700V, 600V
<b>Answer</b>			

Ref361



A 10V dc source with internal resistance 25 ohm is connected to a transmission line of length (L) having an impedance of 100 ohm by the switch. The transmission line is terminated with 900 ohm resistor.  $T$  = amount of time required for a signal to travel the length of transmission line. Calculate  $V_{1+}$ ,  $V_{1-}$ ,  $V_{2+}$ ,  $V_{2-}$ ,  $V_t$

A	8V, 6.4V, -3.84V, -3.072V, 7.488V	B	12V, 12.8V, -1.92V, -1.536V, 3.744V
C	23V, 24.8V, -0.96V, -0.76V, 2V	D	12V, 12.8V, --0.96V, -0.76V, 2V
<b>Answer</b>			

Ref363

Below surge impedance loading, power factor is

A	Lagging	B	Leading
C	Unity	D	
Answer			

Ref365

Which is correct?

A	$V_2/V_1 = I_1/I_2 = e^r$	B	$V_2/V_1 = I_1/I_2 = r$
C	$V_1/V_2 = I_1/I_2 = e^r$	D	$V_2/V_1 = I_1/I_2 = e^{-r}$
Answer			

Ref367

In long transmission line,

A	Load impedance dominates the circuit	B	Line impedance dominates the circuit
C	Load & line impedance equally influence the circuit	D	Load & line impedance do not influence the circuit
Answer			

Ref369

No electric field in direction of propagation is

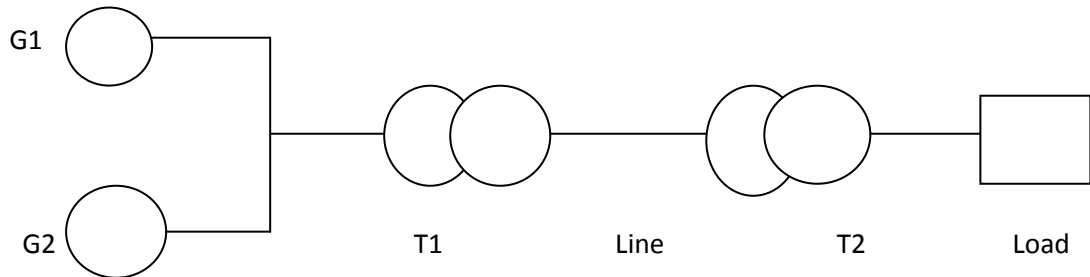
A	TM mode	B	TE mode
C	TEM mode	D	Hybrid mode
Answer			

Ref371

No electric field and magnetic field in direction of propagation is

A	TM mode	B	TE mode
C	TEM mode	D	Hybrid mode
Answer			

Ref372



G1-1000VA 250V  $Z = j0.2$  pu

G2-2000VA 250V  $Z = j0.8$  pu

T1=4000VA 250/800V  $z = j0.1$  pu

Line  $Z = 50 + j200$  ohm

T2= 8000VA 800/400 V  $Z = j0.08$  pu

Load---2500VA 400V

Calculate PU impedance referred to base 5000VA 250V Base

A	Generator= $j 0.75$ pu TrA = $j0.125$ pu, Tr B = $j0.125$ pu Line = $0.39 + j1.56$ pu Load 0.5 pu	B	Generator= $j 1.5$ pu TrA = $j0.25$ pu, Tr B = $j0.25$ pu Line = $0.78 + j3$ pu Load 1 pu
C	Generator= $j 3$ pu TrA = $j0.5$ pu, Tr B = $j0.5$ pu Line = $1.56 + j6$ pu Load 2 pu	D	Generator= $j 3$ pu TrA = $j0.5$ pu, Tr B = $j1$ pu Line = $3 + j4$ pu Load 3pu
Answer			

