

STUDENT CODE							

			APPAR	ATU	S N	UMBEI	2			
Coil 1:	air core									
	<i>R</i> //Ω	V _A /V	ΔV _A /V	V/V		Δ <i>V</i> /V	V _{R′} /V		$\Delta V_R / V$	V _O /V
With one polarity	11/32	VAY	ZV _A , V	.,,		20, 0	VRYV		ZV _R y V	V () V
With reverse polarity										
Average										
	Ζ/Ω	R/Ω	Χ/Ω		<i>L/</i> H					
Coil 1 air core										
	$u_{\rm S}(Z)$	$u_{\rm S}(R)$	<i>u</i> _r (<i>Z</i>)	u _r (R)		$u_{\rm C}(Z)$	u _C (R)		u _C (X)	$u_{\rm C}(L)$
Coil 1 air core										
					<u>+</u>			Ω		
R_1										
<i>L</i> ₁				:	<u>+</u>			m⊦	l	



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Cail	η.	air	COTE

	R′/Ω	V _A /V	$\Delta V_A/V$	V/V	$\Delta V/V$	V_R/V	$\Delta V_R / V$	V _O /V
With								
one								
polarity								
With								
reverse								
polarity								
Average								

	Ζ/Ω	R/Ω	Χ/Ω	L/H
Coil 2				
air core				

	$u_{\rm S}(Z)$	$u_{\rm S}(R)$	$u_{\rm r}(Z)$	$u_{\rm r}(R)$	$u_{\rm C}(Z)$	$u_{\rm C}(R)$	$u_{c}(X)$	$u_{c}(L)$
Coil 2								
air core								

R_2	±	Ω
L ₂	±	mH

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Coil 1: Al core

	R′/Ω	V _A /V	$\Delta V_A/V$	V/V	ΔV/V	V _R ∕V	$\Delta V_R / V$	V _O /V
With one polarity								
With								
reverse polarity								
Average								

	Ζ*/Ω	R^*/Ω	Χ*/Ω	<i>L*/</i> H
Coil 1				
Al core				

	$u_{\rm S}(Z^*)$	$u_{\rm S}(R^*)$	$u_{\rm r}(Z^*)$	$u_r(R^*)$	$u_{\rm C}(Z^*)$	$u_{\rm C}(R^*)$	$u_{c}(X^{*})$	$u_{\rm C}(L^*)$
Coil 1								
Al core								

R* ₁	±	Ω
L* ₁	±	mH

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	R'/Ω	V _A /V	$\Delta V_A/V$	V/V	Δ <i>V</i> /V	V_R/V	$\Delta V_R / V$	V _O /V
With								
one								
polarity								
With								
reverse								
polarity								
Average								

	Z*/Ω	R^*/Ω	X^*/Ω	<i>L*/</i> H
Coil 2				
Al core				

	$u_{\rm S}(Z^*)$	$u_{\rm S}(R^*)$	$u_{\rm r}(Z^*)$	$u_r(R^*)$	$u_{\rm C}(Z^*)$	$u_{\rm C}(R^*)$	$u_{c}(X^{*})$	$u_{\rm C}(L^*)$
Coil 2								
Coil 2 Al core								
core								

R*2	±	Ω
L*2	±	mH

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PART 2		
A4 -	m II	
M ₁₂ =		
M ₂₁ =		
M _{av} =	mH	
k =		
M* ₁₂ =	mH	
M* ₂₁ =		
	mH	
k* =		

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		R				
$R' = 300~\Omega$						
	Obs No	R_{L}/Ω	V _A /V	V/V	V _{R'} /V	V _O /V
With one polarity With reverse polarity Average	1					
With one polarity With reverse polarity	2					
Average						
	_					
	_					
	_					
	4		+	-		



STUDENT CODE							

Obs No With one	R_{L}/Ω	V _A /V	V/V	V _{R'} /V	V _A /V
				- K/	7.
polarity					
With reverse					
polarity					
Average					
With one					
polarity					
With reverse					
polarity					
Average					
1					

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M and Xs from grap	h			
<i>M</i> = mH				
$Xs = \Omega$				



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R	Ω	Z_{PE}	R _{PE}	X_{PE}	R_{R}	X_{R}

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Value of R_L at which R_R is maximum



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EXPERIMENT
2

PART 4						
For coil 1	$L_{\rm core}/R_{\rm core}$	_{re} =				
For coil	$2 L_{core}/R_{co}$	ore =				
	Δ					
Formula	giving ΔP					
ΔP =	mW					

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