Experience certainty



Subject :	Date Date

Experiment -10

Aim: To study the behavior of Series RLC circuit at resonance.

Apparatus: Ac power source, Multimeter, Resistor, Capacitor, inductor and conducting wives.

Circuit diagram?-24 0.0003F

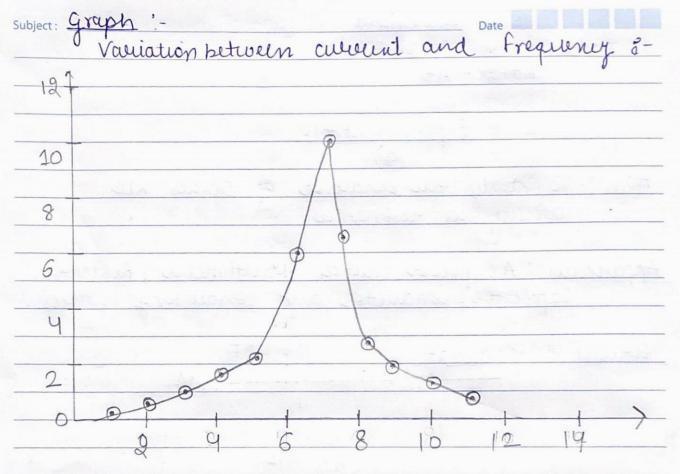
100 volts
10Hz

Obsorvation Table :-Frequency (HZ) awart (Ampela) SNO. 0.19 1 2 6.42 2 3 0.71 3 4 1.2 2.26 5 5 6 6.08 6 6.5 10.01 7 6.38 8 8 2.81 9 9 1.82 10 1.36 10 11 1.1 12 11

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Result: The usonant frequency is approximately 6.5 Hz according to the graph which is equal to the value calculated theoretically.

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(A)			
Subject:	Date Date	0.10.0	
RIC vigari	y the behavior of Par	alle	
NEG WILLIAM	t at resonance.		
March at 10 Plan	in a distribution of the contract of the contr	101.0001.1	
Apparatus regul	ired: - Ac power source	, , kniostai	
capacitor, in	ductor, Resistor, voltme	ter,	
ammeter, i	onnection mire etc.	0	
0.0104			
Cincuit diagra	m :- 0.02F		
1990			
10 91			
	10 Olm8	Carried Carried	
10191	mIH	-1	
	10 valts	- Louisin d	
	A) 142		
Theory: - Vac:	100 VRMS		
£ =	10 Hz		
L= 2H			
C = 0.0003 F			
R= 10-1			
According to	about law :-		
Ti - Vi - D	10 = VC = 189A		
XL	·8A ic = VC = 189A		
	$F_R = \frac{V_R}{R} = 10A$		
9 - 000	$\frac{ix}{iR}$ = 10.06A	7.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	
i - lin	:231/2 - 10:000		
12 - (1 = X	$(R)^{1/2} = 10.06A$		
Λ - 00	Clara IX 5 (OIII °		
4 - 601	ctan <u>ix</u> = [6.214°]		

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Experience certainty



Subject: Observed	ion Table :-	Date
SNO.	Frequency (HZ)	avoient CAmpere
1		12.66
2	2	10.63
3	3	10.22
4	4	10.07
5	5	10.02
6	6	10.00
7	65	9.99
8	1	10.00
9	8	1001
10	9	10.03
12	10	10.69
Graph; -		
12.8		
12.3	ZHAV :	AF E SEV LANGUAGINE
11.8		
11.3		
108		©
10.3		0
9.8	0	
	2 4 6 8	10 12

Risult: The resonant prequency calculated thurstically and by the virtual lab experiment were approximately same (= 6.5 HZ).