

IV.

NOTICE: [] fill in the units in the square brackets

Task: *Measuring the voltage and frequency of electric signals with the oscilloscope*

Key words: electron, electromagnetic force, voltage, frequency

n.	Y	S	U voltage []
1.			
2.			
3.			
4.			
5.			

n.	N	X	T	f frequency []
1.				
2.				
3.				
4.				
5.				

Example of U value and f value calculation:

Discussion

Importance for the medicine / connection with the health and illness:

Possible errors and accuracy:

Conclusion:



Task: Frequency dependence of tissue and tissue model impedance.

Key words: resistance, impedance, capacitance, Ohm law, capacitor

Model Rn	input Ug			output Ur			R= [] Z []
	frequency (Hz)	defl. fact. S	divisions Y Voltage (V) U=S* Y	defl. fact. S	divisions Y Voltage [] U=S* Y		
100	0.5	2	1				
250	0.5	2	1				
500	0.5	2	1				
750	0.5	2	1				
1000	0.5	2	1				
2000	0.5	2	1				
4000	0.5	2	1				
100K	0.5	2	1				

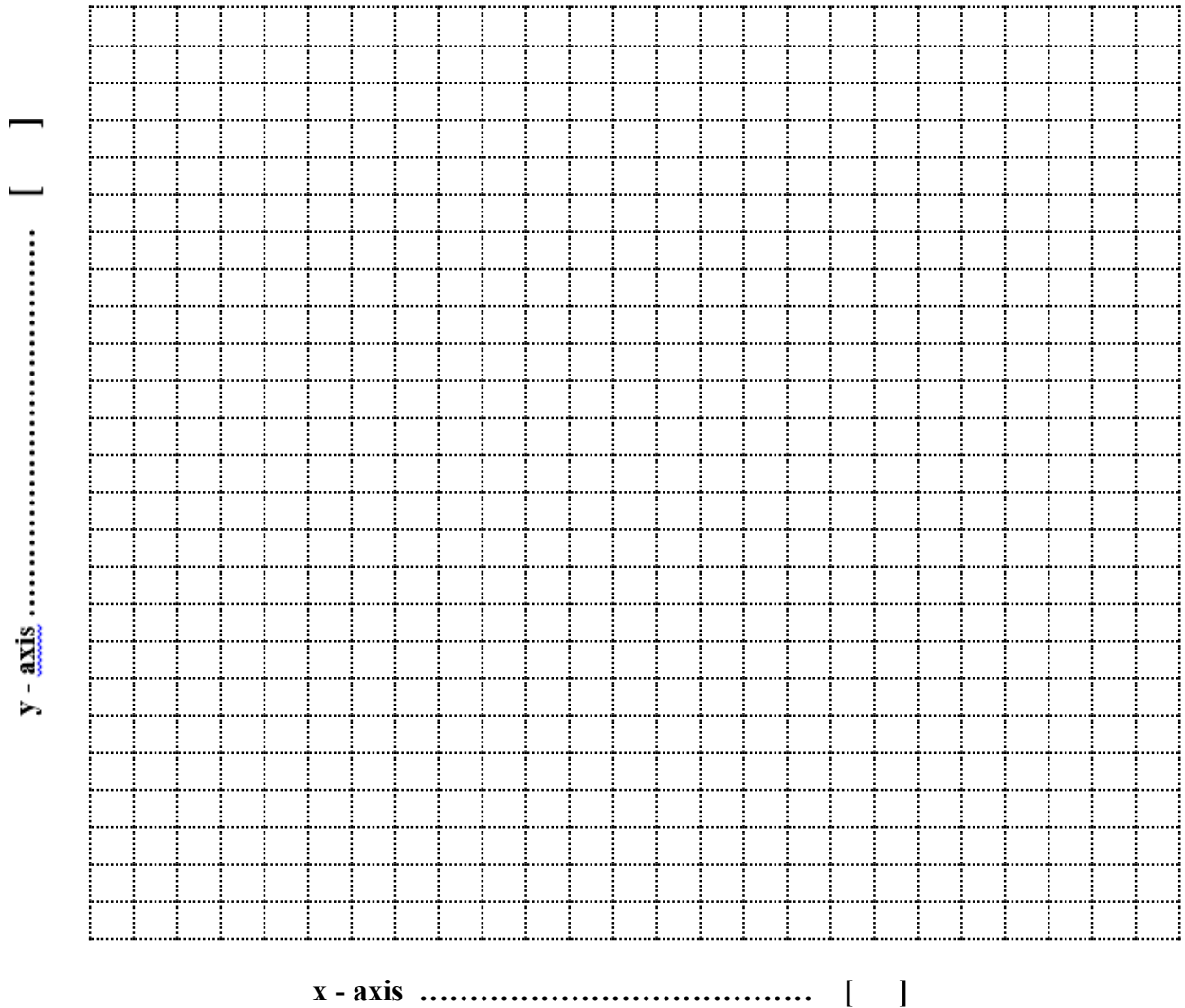
Model Z	input Ug			output Ur			R= [] Z []
	frequency (Hz)	defl. fact. S	divisions Y Voltage (V) U=S* Y	defl. fact. S	divisions Y Voltage [] U=S* Y		
100	0.5	2	1				
250	0.5	2	1				
500	0.5	2	1				
750	0.5	2	1				
1000	0.5	2	1				
2000	0.5	2	1				
4000	0.5	2	1				
100K	0.5	2	1				

Real tissue	input Ug			output Ur			R= [] Z []
	frequency (Hz)	defl. fact. S	divisions Y Voltage (V) U=S* Y	defl. fact. S	divisions Y Voltage [] U=S* Y		
100	0.5	2	1				
250	0.5	2	1				
500	0.5	2	1				
750	0.5	2	1				
1000	0.5	2	1				

2000	0.5	2	1				
4000	0.5	2	1				
100K	0.5	2	1				

Example of Z value calculation:

Graph:



Discussion

Importance for the medicine / connection with the health and illness:

Possible errors and accuracy:

Conclusion:

Task: Skin resistance

Key words: resistance, electrical conductivity, ion, electric charge

Table of measured resistance values:

epidermis	resistance []
natural	
wiped by alcohol	
applied saline solution	
applied ECG gel	

Discussion

Importance for the medicine / connection with the health and illness:

Possible errors and accuracy:

Conclusion:

